



September 23, 2013

Brad Davis  
Zia Engineering & Environmental  
755 S Telshor Blvd Ste F-201  
Las Cruces, NM 88011  
TEL: (575) 993-6824  
FAX (575) 532-1587  
RE: HELSTF Chromate Spill

Order No.: 1309089

Dear Brad Davis:

DHL Analytical, Inc. received 4 sample(s) on 9/11/2013 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of DoD QSM Ver 4.2 and NELAC except where noted in the Case Narrative. All non-NELAC methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. This report shall not be reproduced except in full without the written approval of DHL Analytical, Inc. Thank you for using DHL Analytical.

Sincerely,

A handwritten signature in red ink, appearing to read 'John DuPont', written in a cursive style.

John DuPont  
General Manager

This report was performed under the accreditation of the State of Texas & DoD Laboratory Certification Number: T104704211-13-11 & DoD ELAP #ADE-1416 v2



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755 S. Tebor Blvd. Ste. F-201  
 Las Cruces, NM 88011  
 575-532-1526 H  
 575-532-1587 T

### CHAIN OF CUSTODY RECORD

#1309089

PAGE 1 OF 1

PROJECT NO.		PROJECT NAME			NO. OF CONTAINERS	ANALYSIS REQUESTED						REMARKS
		HELSTF Chromate Spill				TOC	VOCs	TPH	DRO	Hexavalent Chromium	Total Chromium	
SAMPLER'S SIGNATURE												
Bradley T. Davis												
DATE	TIME	SAMPLE ID	MATRIX	LAB NO.	TOC	VOCs	TPH	DRO	Hexavalent Chromium	Total Chromium	pH	REMARKS
9-10-13	1100	HLSE-0143-HMW-041-0913-TB	Water		2	X	X					VOC only - Trip Blank
9-10-13	1100	HLSE-0143-HMW-041-0913	Water		10	X	X	X	X	X	X	
9-10-13	1207	HLSE-0143-HMW-040-0913	Water		10	X	X	X	X	X	X	
	+ STD											
9-10-13	1207	HLSE-0143-HMW-040-0913-ins/msd	Water		10	X	X	X	X	X	X	Matrix Spike/duplicate
9-10-13	1330	HLSE-0143-HMW-038-0913	Water		10	X	X	X	X	X	X	

PROJECT INFORMATION	SAMPLES RECEIVED	1. RELINQUISHED BY: (SIGNATURE) Bradley T. Davis (PRINTED NAME) 9-10-13 RECEIVED BY: (SIGNATURE) Jedman (TIME/DATE) 9/10/13	2. RELINQUISHED BY: (SIGNATURE) Jedman (PRINTED NAME) 9/10/13 JES RECEIVED BY: (SIGNATURE) Jedman (TIME/DATE) 9/10/13 JES	3. RECEIVED BY LAB: (SIGNATURE)
PROJECT MANAGER Brad Davis	TOTAL NO. OF CONTAINERS			(PRINTED NAME)
SHIPPING ID NO.	CHAIN OF CUSTODY SEALS 405			(COMPANY)
VIA: Fed Ex	GOOD CONDITION/CAN FILLED 43			(TIME/DATE)
	CONFORMS TO RECORD	SPECIAL INSTRUCTIONS/COMMENTS: 24 Hold Time on Hexavalent Chromium.		

**FedEx** *NEW Package*  
Express *US Airbill*

FedEx  
Tracking  
Number

8037 3859 7055

Form  
ID No.

0200

Receipt # 100

From

Date

9-10-13

Sender's  
Name

Brad Davis

Phone

575 644-9192

Company

Zia Engineering

Address

755 S. Telford Blvd F-201

City

Las Cruces

State

NM

ZIP

88011

Your Internal Billing Reference

To  
Recipient's  
Name

J. Barker

Phone

512 388-8222

Company

DHL Analytical

Address

2300 Double Creek Drive

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Dept./Floor/Suite/Room

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City

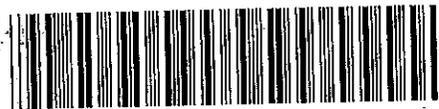
Round Rock

State

TX

ZIP

78664



8037 3859 7055

**4 Express Package Service**

\* To most locations.

NOTE: Service order has changed. Please select carefully.

**Packages up to 1!**  
For packages over 150 lbs. use  
FedEx Express Freight US

**Next Business Day**

FedEx First Overnight  
Earliest next business morning delivery to select  
locations. Friday shipments will be delivered on  
Monday unless SATURDAY Delivery is selected.

FedEx Priority Overnight  
Next business morning.\* Friday shipments will be  
delivered on Monday unless SATURDAY Delivery  
is selected.

FedEx Standard Overnight  
Next business afternoon.\*  
Saturday Delivery NOT available.

**2 or 3 Business Days**

FedEx 2Day A.M.\*  
Second business morning.\*  
Saturday Delivery NOT available.

FedEx 2Day  
Second business afternoon.\* Thursday shipments  
will be delivered on Monday unless SATURDAY  
Delivery is selected.

FedEx Express Saver  
Third business day.\*  
Saturday Delivery NOT available.

**5 Packaging**

\* Declared value limit \$500.

FedEx Envelope\*

FedEx Pak\*

FedEx  
Box

FedEx  
Tube

**0**

**6 Special Handling and Delivery Signature Options**

SATURDAY Delivery

NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

No Signature Required:  
Package may be left without  
obtaining a signature for delivery.

Direct Signature  
Someone at recipient's address  
may sign for delivery. Fee applies.

Indirect Signature  
If no one is available at recipient's  
address, someone at a neighboring  
address may sign for delivery. For  
residential deliveries only. Fee appl.

**Does this shipment contain dangerous goods?**

One box must be checked.

No  Yes  
As per attached  
Shipper's Declaration.

Yes  
Shipper's Declaration  
not required.

Dry Ice  
Dry Ice, S, UN 1845 \_\_\_\_\_ x \_\_\_\_\_ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging  
or placed in a FedEx Express Drop Box.

Cargo Aircraft Only

**7 Payment Bill to:**

Enter FedEx Acct. No. or Credit Card No. below.

Obtain recip.  
Acct. No.

Sender  
Acct. No. in Section  
I will be billed.

Recipient

Third Party

Credit Card

Cash/Chk

Total Packages

Total Weight

Credit Card Auth.

\*Our liability is limited to US\$100 unless you declare a higher value. See the current FedEx Service Guide for details.

644

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**STUDY SEAL**

9-10-13

**SIGNATURE**

Brad Davis

10 11

**QEC**

Quality Environmental Containe  
800-255-3950 • 304-255-3900

Sample Receipt Checklist

Client Name Zia Engineering & Environmental

Date Received: 9/11/2013

Work Order Number 1309089

Received by JB

Checklist completed by: [Signature] 9/11/2013
Signature Date

Reviewed by: [Signature] 9/11/2013
Initials Date

Carrier name FedEx 1day

- Shipping container/cooler in good condition? Yes [checked] No [ ] Not Present [ ]
Custody seals intact on shipping container/cooler? Yes [checked] No [ ] Not Present [ ]
Custody seals intact on sample bottles? Yes [ ] No [ ] Not Present [checked]
Chain of custody present? Yes [checked] No [ ]
Chain of custody signed when relinquished and received? Yes [checked] No [ ]
Chain of custody agrees with sample labels? Yes [checked] No [ ]
Samples in proper container/bottle? Yes [checked] No [ ]
Sample containers intact? Yes [checked] No [ ]
Sufficient sample volume for indicated test? Yes [checked] No [ ]
All samples received within holding time? Yes [checked] No [ ]
Container/Temp Blank temperature in compliance? Yes [checked] No [ ] 4.3 °C
Water - VOA vials have zero headspace? Yes [checked] No [ ] No VOA vials submitted [ ]
Water - pH<2 acceptable upon receipt? Yes [checked] No [ ] NA [ ] LOT # 7179
Adjusted? [ ] Checked by [ ]
Water - ph>9 (S) or ph>12 (CN) acceptable upon receipt? Yes [ ] No [ ] NA [checked] LOT #
Adjusted? [ ] Checked by [ ]

Any No response must be detailed in the comments section below.

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action \_\_\_\_\_

# DHL Analytical, Inc.

## Laboratory Review Checklist: Reportable Data

<b>Project Name:</b> HELSTF Chromate Spill		<b>Date:</b> 9/23/13					
<b>Reviewer Name:</b> Carlos Castro		<b>Laboratory Work Order:</b> 1309089					
<b>Prep Batch Number(s):</b> See Prep Dates Report		<b>Run Batch:</b> See Analytical Dates Report					
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	<b>Chain-of-Custody (C-O-C)</b>					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				R1-01
		2) Were all departures from standard conditions described in an exception report?			X		
R2	OI	<b>Sample and Quality Control (QC) Identification</b>					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	<b>Test Reports</b>					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Were % moisture (or solids) reported for all soil and sediment samples?			X		
		8) If required for the project, TICs reported?			X		
R4	O	<b>Surrogate Recovery Data</b>					
		1) Were surrogates added prior to extraction?	X				
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?		X			R4-02
R5	OI	<b>Test Reports/Summary Forms for Blank Samples</b>					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MQL?	X				
R6	OI	<b>Laboratory Control Samples (LCS):</b>					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	X				
		6) Was the LCSD RPD within QC limits (if applicable)?	X				
R7	OI	<b>Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data</b>					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R7-03
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	<b>Analytical Duplicate Data</b>					
		1) Were appropriate analytical duplicates analyzed for each matrix?	X				
		2) Were analytical duplicates analyzed at the appropriate frequency?	X				
		3) Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	<b>Method Quantitation Limits (MQLs):</b>					
		1) Are the MQLs for each method analyte included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	<b>Other Problems/Anomalies</b>					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				R10-01
		2) Were all necessary corrective actions performed for the reported data?	X				
		3) Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).

3 NA = Not applicable.

4 NR = Not Reviewed.

5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

**DHL Analytical, Inc.**

**Laboratory Review Checklist (continued): Supporting Data**

<b>Project Name:</b> HELSTF Chromate Spill		<b>Date:</b> 9/23/13					
<b>Reviewer Name:</b> Carlos Castro		<b>Laboratory Work Order:</b> 1309089					
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
<b>S1</b>	<b>OI</b>	<b>Initial Calibration (ICAL)</b>					
		1) Were response factors and/or relative response factors for each analyte within QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
<b>S2</b>	<b>OI</b>	<b>Initial and Continuing Calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB)</b>					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
<b>S3</b>	<b>O</b>	<b>Mass Spectral Tuning</b>					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) Were ion abundance data within the method-required QC limits?	X				
<b>S4</b>	<b>O</b>	<b>Internal Standards (IS)</b>					
		1) Were IS area counts and retention times within the method-required QC limits?	X				
<b>S5</b>	<b>OI</b>	<b>Raw Data (NELAC section 1 appendix A glossary, and section 5.12)</b>					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
<b>S6</b>	<b>O</b>	<b>Dual Column Confirmation</b>					
		1) Did dual column confirmation results meet the method-required QC?			X		
<b>S7</b>	<b>O</b>	<b>Tentatively Identified Compounds (TICs)</b>					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
<b>S8</b>	<b>I</b>	<b>Interference Check Sample (ICS) Results</b>					
		1) Were percent recoveries within method QC limits?	X				
<b>S9</b>	<b>I</b>	<b>Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions</b>					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
<b>S10</b>	<b>OI</b>	<b>Method Detection Limit (MDL) Studies</b>					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	X				
<b>S11</b>	<b>OI</b>	<b>Proficiency Test Reports</b>					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
<b>S12</b>	<b>OI</b>	<b>Standards Documentation</b>					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
<b>S13</b>	<b>OI</b>	<b>Compound/Analyte Identification Procedures</b>					
		1) Are the procedures for compound/analyte identification documented?	X				
<b>S14</b>	<b>OI</b>	<b>Demonstration of Analyst Competency (DOC)</b>					
		1) Was DOC conducted consistent with NELAC Chapter 5C?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
<b>S15</b>	<b>OI</b>	<b>Verification/Validation Documentation for Methods (NELAC Chap 5)</b>					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
<b>S16</b>	<b>OI</b>	<b>Laboratory Standard Operating Procedures (SOPs)</b>					
		1) Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).

3 NA = Not applicable.

4 NR = Not Reviewed.

5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

# Laboratory Data Package Signature Page

This data package consists of:

This signature page, the laboratory review checklist, and the following reportable data:

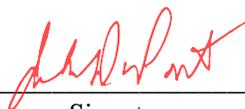
- R1 Field chain-of-custody documentation;
- R2 Sample identification cross-reference;
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
  - a) Items consistent with NELAC 5.13
  - b) dilution factors,
  - c) preparation methods,
  - d) cleanup methods, and
  - e) if required for the project, tentatively identified compounds (TICs).
- R4 Surrogate recovery data including:
  - a) Calculated recovery (%R), and
  - b) The laboratory's surrogate QC limits.
- R5 Test reports/summary forms for blank samples;
- R6 Test reports/summary forms for laboratory control samples (LCSs) including:
  - a) LCS spiking amounts,
  - b) Calculated %R for each analyte, and
  - c) The laboratory's LCS QC limits.
- R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a) Samples associated with the MS/MSD clearly identified,
  - b) MS/MSD spiking amounts,
  - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d) Calculated %Rs and relative percent differences (RPDs), and
  - e) The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
  - a) the amount of analyte measured in the duplicate,
  - b) the calculated RPD, and
  - c) the laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;
- R10 Other problems or anomalies.

The Exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

**Release Statement:** I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

John DuPont – General Manager

Scott Schroeder – Technical Director



Signature

09/23/13

Date

**CLIENT:** Zia Engineering & Environmental  
**Project:** HELSTF Chromate Spill  
**Lab Order:** 1309089

**CASE NARRATIVE**

This case narrative describes abnormalities and deviations that may affect the results and summarizes all known issues that need to be highlighted for the data user to assess the results. This case narrative and the report contents are compliant with DoD QSM Ver 4.2 and NELAC.

Samples were analyzed using the methods outlined in the following references:

Method SW6020A - Metals Analysis  
Method M8015D - DRO Analysis  
Method SW8260C - Volatile Organics  
Method M3500-Cr D - Hexavalent Chromium Analysis  
Method M4500-H+ B - pH of a Water  
Method M5310C - TOC Analysis

**Exception Report R1-01**

The samples were received on and log-in performed on 9/11/13. A total of 4 samples were received and all were analyzed. The samples arrived in good condition and were properly packaged.

**Exception Report R4-02**

For Volatiles analysis performed on 9/11/13 the surrogate recovery for sample HLSF-0143-HMW-041-0913-TB was slightly above the method control limits for Dibromofluoromethane. This is flagged accordingly. The remaining surrogates were within method control limits. No further corrective actions were taken.

For DRO analysis performed on 9/12/13 the surrogate recovery for the method blank was slightly below the method control limits for Isopropylbenzene. This is flagged accordingly. The remaining surrogate was within method control limits. No further corrective actions were taken.

**Exception Report R7-03**

For Volatiles analysis performed on 9/11/13 the matrix spike and matrix spike duplicate recoveries were slightly above the method control limits for 2-Hexanone. These are flagged accordingly in the QC summary report. The reference sample selected for the matrix spike and matrix spike duplicate was from this work order. The LCS was within control limits for this compound. No further corrective actions were taken.

**Exception Report R10-01**

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**CLIENT:** Zia Engineering & Environmental  
**Project:** HELSTF Chromate Spill  
**Lab Order:** 1309089

## CASE NARRATIVE

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For Metals and Hexavalent Chromium analyses by methods SW6020A and M3500-Cr D the Hexavalent Chromium results were slightly higher than the total Chromium results for samples HLSF-0143-HMW-041-0913 and HLSF-0143-HMW-038-0913. These are within the acceptable variation limits. No further corrective actions were taken.

A summary of project communication follows:

DHL Analytical received the Project RFQ from the client on 12/29/09. Completed RFQ returned to client via email on 1/07/2010. Purchase Order/Terms and Conditions received and signed and approved by both parties on 01/25/2010.

Brad Davis of Zia requested a bottle kit via email from Jennifer Barker of DHL on 8/13/13.

DHL Bottle kit #4277 sent on 8/26/13 via Lonestar Overnight, to arrive by 8/29/13.

This sample delivery group arrived at DHL Analytical 9/11/13. Sample summary sent via email from Log-in to client on 9/11/13.

All hardcopies for the sample kit request, bill of lading for sample kit sent and login summary are kept in project folder or are filed in the project/Client folder as part of the Administrative records in the QA office.

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**CLIENT:** Zia Engineering & Environmental  
**Project:** HELSTF Chromate Spill  
**Lab Order:** 1309089

**Work Order Sample Summary**

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<b>Lab Smp ID</b>	<b>Client Sample ID</b>	<b>Tag Number</b>	<b>Date Collected</b>	<b>Date Recved</b>
1309089-01	HLSF-0143-HMW-041-0913-TB		09/10/13 11:00 AM	9/11/2013
1309089-02	HLSF-0143-HMW-041-0913		09/10/13 11:00 AM	9/11/2013
1309089-03	HLSF-0143-HMW-040-0913		09/10/13 12:07 PM	9/11/2013
1309089-04	HLSF-0143-HMW-038-0913		09/10/13 01:30 PM	9/11/2013

**Lab Order:** 1309089  
**Client:** Zia Engineering & Environmental  
**Project:** HELSTF Chromate Spill

**PREP DATES REPORT**

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1309089-01A	HLSF-0143-HMW-041-0913-TB	09/10/13 11:00 AM	Trip Blank	SW5030C	Purge and Trap Water GC/MS	09/11/13 09:53 AM	59433
1309089-02A	HLSF-0143-HMW-041-0913	09/10/13 11:00 AM	Aqueous	SW5030C	Purge and Trap Water GC/MS	09/11/13 09:53 AM	59433
1309089-02B	HLSF-0143-HMW-041-0913	09/10/13 11:00 AM	Aqueous	M5310C	TOC prep Aqueous	09/11/13 09:00 AM	59390
1309089-02C	HLSF-0143-HMW-041-0913	09/10/13 11:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/13/13 09:32 AM	59477
	HLSF-0143-HMW-041-0913	09/10/13 11:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/13/13 09:32 AM	59477
1309089-02D	HLSF-0143-HMW-041-0913	09/10/13 11:00 AM	Aqueous	SW7196A	Hexachrom Prep Water	09/11/13 09:58 AM	59434
	HLSF-0143-HMW-041-0913	09/10/13 11:00 AM	Aqueous	M4500-H+ B	pH Preparation	09/11/13 01:00 PM	59441
1309089-02E	HLSF-0143-HMW-041-0913	09/10/13 11:00 AM	Aqueous	SW3510C	Aq Prep Sep Funnel: DRO	09/11/13 02:11 PM	59442
1309089-03A	HLSF-0143-HMW-040-0913	09/10/13 12:07 PM	Aqueous	SW5030C	Purge and Trap Water GC/MS	09/11/13 09:53 AM	59433
1309089-03B	HLSF-0143-HMW-040-0913	09/10/13 12:07 PM	Aqueous	M5310C	TOC prep Aqueous	09/11/13 09:00 AM	59390
1309089-03C	HLSF-0143-HMW-040-0913	09/10/13 12:07 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/13/13 09:32 AM	59477
	HLSF-0143-HMW-040-0913	09/10/13 12:07 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/13/13 09:32 AM	59477
1309089-03D	HLSF-0143-HMW-040-0913	09/10/13 12:07 PM	Aqueous	SW7196A	Hexachrom Prep Water	09/11/13 09:58 AM	59434
	HLSF-0143-HMW-040-0913	09/10/13 12:07 PM	Aqueous	M4500-H+ B	pH Preparation	09/11/13 01:00 PM	59441
1309089-03E	HLSF-0143-HMW-040-0913	09/10/13 12:07 PM	Aqueous	SW3510C	Aq Prep Sep Funnel: DRO	09/11/13 02:11 PM	59442
1309089-04A	HLSF-0143-HMW-038-0913	09/10/13 01:30 PM	Aqueous	SW5030C	Purge and Trap Water GC/MS	09/11/13 09:53 AM	59433
1309089-04B	HLSF-0143-HMW-038-0913	09/10/13 01:30 PM	Aqueous	M5310C	TOC prep Aqueous	09/11/13 09:00 AM	59390
1309089-04C	HLSF-0143-HMW-038-0913	09/10/13 01:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/13/13 09:32 AM	59477
	HLSF-0143-HMW-038-0913	09/10/13 01:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/13/13 09:32 AM	59477
1309089-04D	HLSF-0143-HMW-038-0913	09/10/13 01:30 PM	Aqueous	SW7196A	Hexachrom Prep Water	09/11/13 09:58 AM	59434

**Lab Order:** 1309089  
**Client:** Zia Engineering & Environmental  
**Project:** HELSTF Chromate Spill

**PREP DATES REPORT**

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1309089-04D	HLSF-0143-HMW-038-0913	09/10/13 01:30 PM	Aqueous	M4500-H+ B	pH Preparation	09/11/13 01:00 PM	59441
1309089-04E	HLSF-0143-HMW-038-0913	09/10/13 01:30 PM	Aqueous	SW3510C	Aq Prep Sep Funnel: DRO	09/11/13 02:11 PM	59442

**Lab Order:** 1309089  
**Client:** Zia Engineering & Environmental  
**Project:** HELSTF Chromate Spill

**ANALYTICAL DATES REPORT**

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1309089-01A	HLSF-0143-HMW-041-0913-TB	Trip Blank	SW8260C	8260 Water Volatiles by GC/MS	59433	1	09/11/13 12:49 PM	GCMS5_130911B
1309089-02A	HLSF-0143-HMW-041-0913	Aqueous	SW8260C	8260 Water Volatiles by GC/MS	59433	1	09/11/13 01:14 PM	GCMS5_130911B
1309089-02B	HLSF-0143-HMW-041-0913	Aqueous	M5310C	Total Organic Carbon	59390	1	09/11/13 04:28 PM	TOC_130911A
1309089-02C	HLSF-0143-HMW-041-0913	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	59477	1	09/17/13 01:13 PM	ICP-MS3_130917A
1309089-02D	HLSF-0143-HMW-041-0913	Aqueous	M3500-Cr D	Hexavalent Chromium-Water	59434	1	09/11/13 10:39 AM	UV/VIS_2_130911B
	HLSF-0143-HMW-041-0913	Aqueous	M4500-H+ B	pH	59441	1	09/11/13 02:20 PM	TITRATOR_130911A
1309089-02E	HLSF-0143-HMW-041-0913	Aqueous	M8015D	TPH Extractable by GC - Water	59442	1	09/12/13 11:15 AM	GC15_130912A
1309089-03A	HLSF-0143-HMW-040-0913	Aqueous	SW8260C	8260 Water Volatiles by GC/MS	59433	1	09/11/13 01:38 PM	GCMS5_130911B
1309089-03B	HLSF-0143-HMW-040-0913	Aqueous	M5310C	Total Organic Carbon	59390	1	09/11/13 04:52 PM	TOC_130911A
1309089-03C	HLSF-0143-HMW-040-0913	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	59477	1	09/17/13 01:19 PM	ICP-MS3_130917A
1309089-03D	HLSF-0143-HMW-040-0913	Aqueous	M3500-Cr D	Hexavalent Chromium-Water	59434	1	09/11/13 10:39 AM	UV/VIS_2_130911B
	HLSF-0143-HMW-040-0913	Aqueous	M4500-H+ B	pH	59441	1	09/11/13 02:22 PM	TITRATOR_130911A
1309089-03E	HLSF-0143-HMW-040-0913	Aqueous	M8015D	TPH Extractable by GC - Water	59442	1	09/12/13 11:24 AM	GC15_130912A
1309089-04A	HLSF-0143-HMW-038-0913	Aqueous	SW8260C	8260 Water Volatiles by GC/MS	59433	1	09/11/13 02:03 PM	GCMS5_130911B
1309089-04B	HLSF-0143-HMW-038-0913	Aqueous	M5310C	Total Organic Carbon	59390	1	09/11/13 06:03 PM	TOC_130911A
1309089-04C	HLSF-0143-HMW-038-0913	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	59477	1	09/17/13 01:26 PM	ICP-MS3_130917A
1309089-04D	HLSF-0143-HMW-038-0913	Aqueous	M3500-Cr D	Hexavalent Chromium-Water	59434	1	09/11/13 10:39 AM	UV/VIS_2_130911B
	HLSF-0143-HMW-038-0913	Aqueous	M4500-H+ B	pH	59441	1	09/11/13 02:25 PM	TITRATOR_130911A
1309089-04E	HLSF-0143-HMW-038-0913	Aqueous	M8015D	TPH Extractable by GC - Water	59442	1	09/12/13 11:49 AM	GC15_130912A

**DHL Analytical, Inc.**

Date: 23-Sep-13

**CLIENT:** Zia Engineering & Environmental  
**Project:** HELSTF Chromate Spill  
**Project No:**  
**Lab Order:** 1309089

**Client Sample ID:** HLSF-0143-HMW-041-0913-TB  
**Lab ID:** 1309089-01  
**Collection Date:** 09/10/13 11:00 AM  
**Matrix:** TRIP BLANK

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>8260 WATER VOLATILES BY GC/MS</b>		<b>SW8260C</b>			Analyst: KL		
1,1,1,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
1,1,1-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
1,1,2,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
1,1,2-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
1,1-Dichloroethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
1,1-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
1,1-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
1,2,3-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	09/11/13 12:49 PM
1,2,3-Trichloropropane	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 12:49 PM
1,2,4-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	09/11/13 12:49 PM
1,2,4-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	09/11/13 12:49 PM
1,2-Dibromo-3-chloropropane	<0.00300	0.00300	0.0100		mg/L	1	09/11/13 12:49 PM
1,2-Dibromoethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
1,2-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 12:49 PM
1,2-Dichloroethane	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 12:49 PM
1,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
1,3,5-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	09/11/13 12:49 PM
1,3-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 12:49 PM
1,3-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
1,4-Dichloro-2-butene	<0.00200	0.00200	0.00200		mg/L	1	09/11/13 12:49 PM
1,4-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 12:49 PM
2,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
2-Butanone	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 12:49 PM
2-Chloroethylvinylether	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 12:49 PM
2-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 12:49 PM
2-Hexanone	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 12:49 PM
4-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 12:49 PM
4-Methyl-2-pentanone	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 12:49 PM
Acetone	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 12:49 PM
Acrylonitrile	<0.00100	0.00100	0.00300		mg/L	1	09/11/13 12:49 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
Bromobenzene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
Bromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
Bromodichloromethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
Bromoform	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
Bromomethane	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 12:49 PM
Carbon disulfide	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 12:49 PM
Carbon tetrachloride	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM

**Qualifiers:** \* Value exceeds TCLP Maximum Concentration Level  
 C Sample Result or QC discussed in the Case Narrative  
 E TPH pattern not Gas or Diesel Range Pattern  
 MDL Method Detection Limit  
 RL Reporting Limit  
 N Parameter not NELAC certified  
 B Analyte detected in the associated Method Blank  
 DF Dilution Factor  
 J Analyte detected between MDL and RL  
 ND Not Detected at the Method Detection Limit  
 S Spike Recovery outside control limits

**DHL Analytical, Inc.**

Date: 23-Sep-13

**CLIENT:** Zia Engineering & Environmental  
**Project:** HELSTF Chromate Spill  
**Project No:**  
**Lab Order:** 1309089

**Client Sample ID:** HLSF-0143-HMW-041-0913-TB  
**Lab ID:** 1309089-01  
**Collection Date:** 09/10/13 11:00 AM  
**Matrix:** TRIP BLANK

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>8260 WATER VOLATILES BY GC/MS</b>		<b>SW8260C</b>			Analyst: <b>KL</b>		
Chlorobenzene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
Chloroethane	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 12:49 PM
Chloroform	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 12:49 PM
Chloromethane	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 12:49 PM
cis-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
cis-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
Dibromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
Dibromomethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
Dichlorodifluoromethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 12:49 PM
Iodomethane	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 12:49 PM
Isopropylbenzene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/11/13 12:49 PM
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 12:49 PM
Methylene chloride	<0.00250	0.00250	0.00250		mg/L	1	09/11/13 12:49 PM
n-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 12:49 PM
n-Propylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 12:49 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 12:49 PM
p-Isopropyltoluene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 12:49 PM
sec-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 12:49 PM
Styrene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
tert-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 12:49 PM
Tetrachloroethene	<0.000600	0.000600	0.00200		mg/L	1	09/11/13 12:49 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/11/13 12:49 PM
trans-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
trans-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
Trichloroethene	<0.000600	0.000600	0.00200		mg/L	1	09/11/13 12:49 PM
Trichlorofluoromethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 12:49 PM
Vinyl chloride	<0.000100	0.000100	0.00100		mg/L	1	09/11/13 12:49 PM
Surr: 1,2-Dichloroethane-d4	113	0	70-120		%REC	1	09/11/13 12:49 PM
Surr: 4-Bromofluorobenzene	105	0	75-120		%REC	1	09/11/13 12:49 PM
Surr: Dibromofluoromethane	120	0	85-115	S	%REC	1	09/11/13 12:49 PM
Surr: Toluene-d8	97.6	0	85-120		%REC	1	09/11/13 12:49 PM

<b>Qualifiers:</b>	* Value exceeds TCLP Maximum Concentration Level	B Analyte detected in the associated Method Blank
	C Sample Result or QC discussed in the Case Narrative	DF Dilution Factor
	E TPH pattern not Gas or Diesel Range Pattern	J Analyte detected between MDL and RL
	MDL Method Detection Limit	ND Not Detected at the Method Detection Limit
	RL Reporting Limit	S Spike Recovery outside control limits
	N Parameter not NELAC certified	

**CLIENT:** Zia Engineering & Environmental  
**Project:** HELSTF Chromate Spill  
**Project No:**  
**Lab Order:** 1309089

**Client Sample ID:** HLSF-0143-HMW-041-0913  
**Lab ID:** 1309089-02  
**Collection Date:** 09/10/13 11:00 AM  
**Matrix:** AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>TPH EXTRACTABLE BY GC - WATER</b>		<b>M8015D</b>			Analyst: <b>AV</b>		
TPH-DRO C10-C28	0.107	0.0800	0.100		mg/L	1	09/12/13 11:15 AM
Surr: Isopropylbenzene	56.3	0	47-142		%REC	1	09/12/13 11:15 AM
Surr: Octacosane	89.7	0	51-124		%REC	1	09/12/13 11:15 AM
<b>TRACE METALS: ICP-MS - WATER</b>		<b>SW6020A</b>			Analyst: <b>SW</b>		
Chromium	0.372	0.00200	0.00600		mg/L	1	09/17/13 01:13 PM
<b>8260 WATER VOLATILES BY GC/MS</b>		<b>SW8260C</b>			Analyst: <b>KL</b>		
1,1,1,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
1,1,1-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
1,1,2,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
1,1,2-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
1,1-Dichloroethane	0.000350	0.000200	0.00100	J	mg/L	1	09/11/13 01:14 PM
1,1-Dichloroethene	0.00231	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
1,1-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
1,2,3-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	09/11/13 01:14 PM
1,2,3-Trichloropropane	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:14 PM
1,2,4-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	09/11/13 01:14 PM
1,2,4-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	09/11/13 01:14 PM
1,2-Dibromo-3-chloropropane	<0.00300	0.00300	0.0100		mg/L	1	09/11/13 01:14 PM
1,2-Dibromoethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
1,2-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:14 PM
1,2-Dichloroethane	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:14 PM
1,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
1,3,5-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	09/11/13 01:14 PM
1,3-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:14 PM
1,3-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
1,4-Dichloro-2-butene	<0.00200	0.00200	0.00200		mg/L	1	09/11/13 01:14 PM
1,4-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:14 PM
2,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
2-Butanone	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 01:14 PM
2-Chloroethylvinylether	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 01:14 PM
2-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:14 PM
2-Hexanone	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 01:14 PM
4-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:14 PM
4-Methyl-2-pentanone	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 01:14 PM
Acetone	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 01:14 PM
Acrylonitrile	<0.00100	0.00100	0.00300		mg/L	1	09/11/13 01:14 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM

**Qualifiers:**

*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
RL	Reporting Limit	S	Spike Recovery outside control limits
N	Parameter not NELAC certified		

**DHL Analytical, Inc.**

Date: 23-Sep-13

**CLIENT:** Zia Engineering & Environmental  
**Project:** HELSTF Chromate Spill  
**Project No:**  
**Lab Order:** 1309089

**Client Sample ID:** HLSF-0143-HMW-041-0913  
**Lab ID:** 1309089-02  
**Collection Date:** 09/10/13 11:00 AM  
**Matrix:** AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>8260 WATER VOLATILES BY GC/MS</b>		<b>SW8260C</b>			Analyst: KL		
Bromobenzene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
Bromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
Bromodichloromethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
Bromoform	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
Bromomethane	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:14 PM
Carbon disulfide	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 01:14 PM
Carbon tetrachloride	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
Chlorobenzene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
Chloroethane	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:14 PM
Chloroform	0.000700	0.000300	0.00100	J	mg/L	1	09/11/13 01:14 PM
Chloromethane	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:14 PM
cis-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
cis-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
Dibromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
Dibromomethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
Dichlorodifluoromethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:14 PM
Iodomethane	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 01:14 PM
Isopropylbenzene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/11/13 01:14 PM
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:14 PM
Methylene chloride	<0.00250	0.00250	0.00250		mg/L	1	09/11/13 01:14 PM
n-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:14 PM
n-Propylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:14 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:14 PM
p-Isopropyltoluene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:14 PM
sec-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:14 PM
Styrene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
tert-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:14 PM
Tetrachloroethene	<0.000600	0.000600	0.00200		mg/L	1	09/11/13 01:14 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/11/13 01:14 PM
trans-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
trans-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
Trichloroethene	0.0764	0.000600	0.00200		mg/L	1	09/11/13 01:14 PM
Trichlorofluoromethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:14 PM
Vinyl chloride	<0.000100	0.000100	0.00100		mg/L	1	09/11/13 01:14 PM
Surr: 1,2-Dichloroethane-d4	103	0	70-120		%REC	1	09/11/13 01:14 PM
Surr: 4-Bromofluorobenzene	106	0	75-120		%REC	1	09/11/13 01:14 PM

<b>Qualifiers:</b>	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

**DHL Analytical, Inc.**

Date: 23-Sep-13

**CLIENT:** Zia Engineering & Environmental  
**Project:** HELSTF Chromate Spill  
**Project No:**  
**Lab Order:** 1309089

**Client Sample ID:** HLSF-0143-HMW-041-0913  
**Lab ID:** 1309089-02  
**Collection Date:** 09/10/13 11:00 AM  
**Matrix:** AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>8260 WATER VOLATILES BY GC/MS</b>		<b>SW8260C</b>		Analyst: <b>KL</b>			
Surr: Dibromofluoromethane	102	0	85-115		%REC	1	09/11/13 01:14 PM
Surr: Toluene-d8	99.8	0	85-120		%REC	1	09/11/13 01:14 PM
<b>HEXAVALENT CHROMIUM-WATER</b>		<b>M3500-CR D</b>		Analyst: <b>LM</b>			
Hexavalent Chromium	0.440	0.00800	0.0100		mg/L	1	09/11/13 10:39 AM
<b>PH</b>		<b>M4500-H+ B</b>		Analyst: <b>JCG</b>			
pH	7.48	0	0		pH Units@20.7°C	1	09/11/13 02:20 PM
<b>TOTAL ORGANIC CARBON</b>		<b>M5310C</b>		Analyst: <b>JCG</b>			
Total Organic Carbon	1.31	0.300	1.00		mg/L	1	09/11/13 04:28 PM

<b>Qualifiers:</b>	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

**DHL Analytical, Inc.**

Date: 23-Sep-13

**CLIENT:** Zia Engineering & Environmental  
**Project:** HELSTF Chromate Spill  
**Project No:**  
**Lab Order:** 1309089

**Client Sample ID:** HLSF-0143-HMW-040-0913  
**Lab ID:** 1309089-03  
**Collection Date:** 09/10/13 12:07 PM  
**Matrix:** AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>TPH EXTRACTABLE BY GC - WATER</b>		<b>M8015D</b>			Analyst: <b>AV</b>		
TPH-DRO C10-C28	0.0983	0.0800	0.100	J	mg/L	1	09/12/13 11:24 AM
Surr: Isopropylbenzene	59.8	0	47-142		%REC	1	09/12/13 11:24 AM
Surr: Octacosane	88.3	0	51-124		%REC	1	09/12/13 11:24 AM
<b>TRACE METALS: ICP-MS - WATER</b>		<b>SW6020A</b>			Analyst: <b>SW</b>		
Chromium	0.00376	0.00200	0.00600	J	mg/L	1	09/17/13 01:19 PM
<b>8260 WATER VOLATILES BY GC/MS</b>		<b>SW8260C</b>			Analyst: <b>KL</b>		
1,1,1,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
1,1,1-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
1,1,2,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
1,1,2-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
1,1-Dichloroethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
1,1-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
1,1-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
1,2,3-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	09/11/13 01:38 PM
1,2,3-Trichloropropane	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:38 PM
1,2,4-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	09/11/13 01:38 PM
1,2,4-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	09/11/13 01:38 PM
1,2-Dibromo-3-chloropropane	<0.00300	0.00300	0.0100		mg/L	1	09/11/13 01:38 PM
1,2-Dibromoethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
1,2-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:38 PM
1,2-Dichloroethane	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:38 PM
1,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
1,3,5-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	09/11/13 01:38 PM
1,3-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:38 PM
1,3-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
1,4-Dichloro-2-butene	<0.00200	0.00200	0.00200		mg/L	1	09/11/13 01:38 PM
1,4-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:38 PM
2,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
2-Butanone	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 01:38 PM
2-Chloroethylvinylether	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 01:38 PM
2-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:38 PM
2-Hexanone	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 01:38 PM
4-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:38 PM
4-Methyl-2-pentanone	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 01:38 PM
Acetone	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 01:38 PM
Acrylonitrile	<0.00100	0.00100	0.00300		mg/L	1	09/11/13 01:38 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM

**Qualifiers:**

*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
RL	Reporting Limit	S	Spike Recovery outside control limits
N	Parameter not NELAC certified		

**DHL Analytical, Inc.**

Date: 23-Sep-13

**CLIENT:** Zia Engineering & Environmental  
**Project:** HELSTF Chromate Spill  
**Project No:**  
**Lab Order:** 1309089

**Client Sample ID:** HLSF-0143-HMW-040-0913  
**Lab ID:** 1309089-03  
**Collection Date:** 09/10/13 12:07 PM  
**Matrix:** AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>8260 WATER VOLATILES BY GC/MS</b>		<b>SW8260C</b>			Analyst: <b>KL</b>		
Bromobenzene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
Bromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
Bromodichloromethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
Bromoform	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
Bromomethane	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:38 PM
Carbon disulfide	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 01:38 PM
Carbon tetrachloride	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
Chlorobenzene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
Chloroethane	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:38 PM
Chloroform	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:38 PM
Chloromethane	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:38 PM
cis-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
cis-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
Dibromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
Dibromomethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
Dichlorodifluoromethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:38 PM
Iodomethane	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 01:38 PM
Isopropylbenzene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/11/13 01:38 PM
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:38 PM
Methylene chloride	<0.00250	0.00250	0.00250		mg/L	1	09/11/13 01:38 PM
n-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:38 PM
n-Propylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:38 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:38 PM
p-Isopropyltoluene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:38 PM
sec-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:38 PM
Styrene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
tert-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 01:38 PM
Tetrachloroethene	<0.000600	0.000600	0.00200		mg/L	1	09/11/13 01:38 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/11/13 01:38 PM
trans-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
trans-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
Trichloroethene	<0.000600	0.000600	0.00200		mg/L	1	09/11/13 01:38 PM
Trichlorofluoromethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 01:38 PM
Vinyl chloride	<0.000100	0.000100	0.00100		mg/L	1	09/11/13 01:38 PM
Surr: 1,2-Dichloroethane-d4	106	0	70-120		%REC	1	09/11/13 01:38 PM
Surr: 4-Bromofluorobenzene	105	0	75-120		%REC	1	09/11/13 01:38 PM

<b>Qualifiers:</b>	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

**DHL Analytical, Inc.**

Date: 23-Sep-13

**CLIENT:** Zia Engineering & Environmental  
**Project:** HELSTF Chromate Spill  
**Project No:**  
**Lab Order:** 1309089

**Client Sample ID:** HLSF-0143-HMW-040-0913  
**Lab ID:** 1309089-03  
**Collection Date:** 09/10/13 12:07 PM  
**Matrix:** AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>8260 WATER VOLATILES BY GC/MS</b>		<b>SW8260C</b>		Analyst: <b>KL</b>			
Surr: Dibromofluoromethane	102	0	85-115		%REC	1	09/11/13 01:38 PM
Surr: Toluene-d8	97.5	0	85-120		%REC	1	09/11/13 01:38 PM
<b>HEXAVALENT CHROMIUM-WATER</b>		<b>M3500-CR D</b>		Analyst: <b>LM</b>			
Hexavalent Chromium	<0.00800	0.00800	0.0100		mg/L	1	09/11/13 10:39 AM
<b>PH</b>		<b>M4500-H+ B</b>		Analyst: <b>JCG</b>			
pH	7.60	0	0		pH Units@20.8°C	1	09/11/13 02:22 PM
<b>TOTAL ORGANIC CARBON</b>		<b>M5310C</b>		Analyst: <b>JCG</b>			
Total Organic Carbon	1.12	0.300	1.00		mg/L	1	09/11/13 04:52 PM

**Qualifiers:**

*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
RL	Reporting Limit	S	Spike Recovery outside control limits
N	Parameter not NELAC certified		

**DHL Analytical, Inc.**

Date: 23-Sep-13

**CLIENT:** Zia Engineering & Environmental  
**Project:** HELSTF Chromate Spill  
**Project No:**  
**Lab Order:** 1309089

**Client Sample ID:** HLSF-0143-HMW-038-0913  
**Lab ID:** 1309089-04  
**Collection Date:** 09/10/13 01:30 PM  
**Matrix:** AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>TPH EXTRACTABLE BY GC - WATER</b>		<b>M8015D</b>			Analyst: <b>AV</b>		
TPH-DRO C10-C28	0.125	0.0800	0.100		mg/L	1	09/12/13 11:49 AM
Surr: Isopropylbenzene	55.9	0	47-142		%REC	1	09/12/13 11:49 AM
Surr: Octacosane	95.5	0	51-124		%REC	1	09/12/13 11:49 AM
<b>TRACE METALS: ICP-MS - WATER</b>		<b>SW6020A</b>			Analyst: <b>SW</b>		
Chromium	0.0467	0.00200	0.00600		mg/L	1	09/17/13 01:26 PM
<b>8260 WATER VOLATILES BY GC/MS</b>		<b>SW8260C</b>			Analyst: <b>KL</b>		
1,1,1,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
1,1,1-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
1,1,2,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
1,1,2-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
1,1-Dichloroethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
1,1-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
1,1-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
1,2,3-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	09/11/13 02:03 PM
1,2,3-Trichloropropane	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 02:03 PM
1,2,4-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	09/11/13 02:03 PM
1,2,4-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	09/11/13 02:03 PM
1,2-Dibromo-3-chloropropane	<0.00300	0.00300	0.0100		mg/L	1	09/11/13 02:03 PM
1,2-Dibromoethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
1,2-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 02:03 PM
1,2-Dichloroethane	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 02:03 PM
1,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
1,3,5-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	09/11/13 02:03 PM
1,3-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 02:03 PM
1,3-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
1,4-Dichloro-2-butene	<0.00200	0.00200	0.00200		mg/L	1	09/11/13 02:03 PM
1,4-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 02:03 PM
2,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
2-Butanone	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 02:03 PM
2-Chloroethylvinylether	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 02:03 PM
2-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 02:03 PM
2-Hexanone	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 02:03 PM
4-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 02:03 PM
4-Methyl-2-pentanone	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 02:03 PM
Acetone	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 02:03 PM
Acrylonitrile	<0.00100	0.00100	0.00300		mg/L	1	09/11/13 02:03 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM

**Qualifiers:**

*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
RL	Reporting Limit	S	Spike Recovery outside control limits
N	Parameter not NELAC certified		

**DHL Analytical, Inc.**

Date: 23-Sep-13

**CLIENT:** Zia Engineering & Environmental  
**Project:** HELSTF Chromate Spill  
**Project No:**  
**Lab Order:** 1309089

**Client Sample ID:** HLSF-0143-HMW-038-0913  
**Lab ID:** 1309089-04  
**Collection Date:** 09/10/13 01:30 PM  
**Matrix:** AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>8260 WATER VOLATILES BY GC/MS</b>		<b>SW8260C</b>			Analyst: KL		
Bromobenzene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
Bromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
Bromodichloromethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
Bromoform	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
Bromomethane	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 02:03 PM
Carbon disulfide	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 02:03 PM
Carbon tetrachloride	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
Chlorobenzene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
Chloroethane	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 02:03 PM
Chloroform	0.000620	0.000300	0.00100	J	mg/L	1	09/11/13 02:03 PM
Chloromethane	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 02:03 PM
cis-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
cis-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
Dibromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
Dibromomethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
Dichlorodifluoromethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 02:03 PM
Iodomethane	<0.00500	0.00500	0.0150		mg/L	1	09/11/13 02:03 PM
Isopropylbenzene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	09/11/13 02:03 PM
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 02:03 PM
Methylene chloride	<0.00250	0.00250	0.00250		mg/L	1	09/11/13 02:03 PM
n-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 02:03 PM
n-Propylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 02:03 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 02:03 PM
p-Isopropyltoluene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 02:03 PM
sec-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 02:03 PM
Styrene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
tert-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	09/11/13 02:03 PM
Tetrachloroethene	<0.000600	0.000600	0.00200		mg/L	1	09/11/13 02:03 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	09/11/13 02:03 PM
trans-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
trans-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
Trichloroethene	0.0126	0.000600	0.00200		mg/L	1	09/11/13 02:03 PM
Trichlorofluoromethane	<0.000200	0.000200	0.00100		mg/L	1	09/11/13 02:03 PM
Vinyl chloride	<0.000100	0.000100	0.00100		mg/L	1	09/11/13 02:03 PM
Surr: 1,2-Dichloroethane-d4	106	0	70-120		%REC	1	09/11/13 02:03 PM
Surr: 4-Bromofluorobenzene	106	0	75-120		%REC	1	09/11/13 02:03 PM

**Qualifiers:** \* Value exceeds TCLP Maximum Concentration Level B Analyte detected in the associated Method Blank  
C Sample Result or QC discussed in the Case Narrative DF Dilution Factor  
E TPH pattern not Gas or Diesel Range Pattern J Analyte detected between MDL and RL  
MDL Method Detection Limit ND Not Detected at the Method Detection Limit  
RL Reporting Limit S Spike Recovery outside control limits  
N Parameter not NELAC certified

**DHL Analytical, Inc.**

Date: 23-Sep-13

**CLIENT:** Zia Engineering & Environmental  
**Project:** HELSTF Chromate Spill  
**Project No:**  
**Lab Order:** 1309089

**Client Sample ID:** HLSF-0143-HMW-038-0913  
**Lab ID:** 1309089-04  
**Collection Date:** 09/10/13 01:30 PM  
**Matrix:** AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>8260 WATER VOLATILES BY GC/MS</b>		<b>SW8260C</b>		Analyst: <b>KL</b>			
Surr: Dibromofluoromethane	104	0	85-115		%REC	1	09/11/13 02:03 PM
Surr: Toluene-d8	99.1	0	85-120		%REC	1	09/11/13 02:03 PM
<b>HEXAVALENT CHROMIUM-WATER</b>		<b>M3500-CR D</b>		Analyst: <b>LM</b>			
Hexavalent Chromium	0.0524	0.00800	0.0100		mg/L	1	09/11/13 10:39 AM
<b>PH</b>		<b>M4500-H+ B</b>		Analyst: <b>JCG</b>			
pH	7.55	0	0		pH Units@20.9°C	1	09/11/13 02:25 PM
<b>TOTAL ORGANIC CARBON</b>		<b>M5310C</b>		Analyst: <b>JCG</b>			
Total Organic Carbon	0.726	0.300	1.00	J	mg/L	1	09/11/13 06:03 PM

**Qualifiers:**

*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
RL	Reporting Limit	S	Spike Recovery outside control limits
N	Parameter not NELAC certified		

**CLIENT:** Zia Engineering & Environmental

**ANALYTICAL QC SUMMARY REPORT**

**Work Order:** 1309089

**Project:** HELSTF Chromate Spill

**RunID:** GC15\_130912A

The QC data in batch 59442 applies to the following samples: 1309089-02E, 1309089-03E, 1309089-04E

Sample ID	<b>LCS-59442</b>	Batch ID:	<b>59442</b>	TestNo:	<b>M8015D</b>	Units:	<b>mg/L</b>			
SampType:	<b>LCS</b>	Run ID:	<b>GC15_130912A</b>	Analysis Date:	<b>9/12/2013 9:51:03 AM</b>	Prep Date:	<b>9/11/2013</b>			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	1.12	0.100	1.250	0	89.6	50	114			
Surr: Isopropylbenzene	0.0575		0.1000		57.5	47	142			
Surr: Octacosane	0.0849		0.1000		84.9	51	124			

Sample ID	<b>MB-59442</b>	Batch ID:	<b>59442</b>	TestNo:	<b>M8015D</b>	Units:	<b>mg/L</b>			
SampType:	<b>MBLK</b>	Run ID:	<b>GC15_130912A</b>	Analysis Date:	<b>9/12/2013 10:08:02 AM</b>	Prep Date:	<b>9/11/2013</b>			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	<0.0800	0.100								
Surr: Isopropylbenzene	0.0465		0.1000		46.5	47	142			S
Surr: Octacosane	0.0826		0.1000		82.6	51	124			

Sample ID	<b>1309022-04HMS</b>	Batch ID:	<b>59442</b>	TestNo:	<b>M8015D</b>	Units:	<b>mg/L</b>			
SampType:	<b>MS</b>	Run ID:	<b>GC15_130912A</b>	Analysis Date:	<b>9/12/2013 10:33:28 AM</b>	Prep Date:	<b>9/11/2013</b>			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	1.22	0.100	1.250	0	97.7	50	114			
Surr: Isopropylbenzene	0.0535		0.1000		53.5	47	142			
Surr: Octacosane	0.0926		0.1000		92.6	51	124			

Sample ID	<b>1309022-04HMSD</b>	Batch ID:	<b>59442</b>	TestNo:	<b>M8015D</b>	Units:	<b>mg/L</b>			
SampType:	<b>MSD</b>	Run ID:	<b>GC15_130912A</b>	Analysis Date:	<b>9/12/2013 10:41:56 AM</b>	Prep Date:	<b>9/11/2013</b>			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	1.23	0.100	1.250	0	98.3	50	114	0.575	30	
Surr: Isopropylbenzene	0.0529		0.1000		52.9	47	142	0	0	
Surr: Octacosane	0.0967		0.1000		96.7	51	124	0	0	

Sample ID	<b>1309089-03EMS</b>	Batch ID:	<b>59442</b>	TestNo:	<b>M8015D</b>	Units:	<b>mg/L</b>			
SampType:	<b>MS</b>	Run ID:	<b>GC15_130912A</b>	Analysis Date:	<b>9/12/2013 11:32:43 AM</b>	Prep Date:	<b>9/11/2013</b>			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	1.12	0.100	1.250	0.09828	82.1	50	114			
Surr: Isopropylbenzene	0.0535		0.1000		53.5	47	142			
Surr: Octacosane	0.0908		0.1000		90.8	51	124			

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - J Analyte detected between MDL and RL
  - ND Not Detected at the Method Detection Limit
  - RL Reporting Limit
  - J Analyte detected between SDL and RL
  - DF Dilution Factor
  - MDL Method Detection Limit
  - R RPD outside accepted control limits
  - S Spike Recovery outside control limits
  - N Parameter not NELAC certified

**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1309089  
**Project:** HELSTF Chromate Spill

## ANALYTICAL QC SUMMARY REPORT

**RunID: GC15\_130912A**

Sample ID	1309089-03EMSD	Batch ID:	59442	TestNo:	M8015D	Units:	mg/L			
SampType:	MSD	Run ID:	GC15_130912A	Analysis Date:	9/12/2013 11:41:10 AM	Prep Date:	9/11/2013			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	1.16	0.100	1.250	0.09828	84.7	50	114	2.85	30	
Surr: Isopropylbenzene	0.0531		0.1000		53.1	47	142	0	0	
Surr: Octacosane	0.0853		0.1000		85.3	51	124	0	0	

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	DF Dilution Factor	
	J Analyte detected between MDL and RL	MDL Method Detection Limit	
	ND Not Detected at the Method Detection Limit	R RPD outside accepted control limits	
	RL Reporting Limit	S Spike Recovery outside control limits	
	J Analyte detected between SDL and RL	N Parameter not NELAC certified	

**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1309089  
**Project:** HELSTF Chromate Spill

## ANALYTICAL QC SUMMARY REPORT

**RunID: GC15\_130912A**

Sample ID: <b>ICV-130912</b>	Batch ID: <b>R68620</b>	TestNo: <b>M8015D</b>	Units: <b>mg/L</b>
SampType: <b>ICV</b>	Run ID: <b>GC15_130912A</b>	Analysis Date: <b>9/12/2013 9:32:21 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	498	0.100	500.0	0	99.7	80	120			
Surr: Isopropylbenzene	25.7		25.00		103	80	120			
Surr: Octacosane	20.2		25.00		80.7	80	120			

Sample ID: <b>CCV1-130912</b>	Batch ID: <b>R68620</b>	TestNo: <b>M8015D</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>GC15_130912A</b>	Analysis Date: <b>9/12/2013 12:46:56 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	258	0.100	250.0	0	103	80	120			
Surr: Isopropylbenzene	13.2		12.50		106	80	120			
Surr: Octacosane	12.8		12.50		103	80	120			

<p><b>Qualifiers:</b></p> <p>B Analyte detected in the associated Method Blank</p> <p>J Analyte detected between MDL and RL</p> <p>ND Not Detected at the Method Detection Limit</p> <p>RL Reporting Limit</p> <p>J Analyte detected between SDL and RL</p>	<p>DF Dilution Factor</p> <p>MDL Method Detection Limit</p> <p>R RPD outside accepted control limits</p> <p>S Spike Recovery outside control limits</p> <p>N Parameter not NELAC certified</p>
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**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1309089  
**Project:** HELSTF Chromate Spill

## ANALYTICAL QC SUMMARY REPORT

**RunID: ICP-MS3\_130917A**

The QC data in batch 59477 applies to the following samples: 1309089-02C, 1309089-03C, 1309089-04C

Sample ID <b>MB-59477</b>	Batch ID: <b>59477</b>	TestNo: <b>SW6020A</b>	Units: <b>mg/L</b>							
SampType: <b>MBLK</b>	Run ID: <b>ICP-MS3_130917A</b>	Analysis Date: <b>9/17/2013 12:13:00 PM</b>	Prep Date: <b>9/13/2013</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chromium	<0.00200	0.00500								
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Sample ID <b>LCS-59477</b>	Batch ID: <b>59477</b>	TestNo: <b>SW6020A</b>	Units: <b>mg/L</b>							
SampType: <b>LCS</b>	Run ID: <b>ICP-MS3_130917A</b>	Analysis Date: <b>9/17/2013 12:19:00 PM</b>	Prep Date: <b>9/13/2013</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chromium	0.190	0.00500	0.200	0	95.2	80	120			
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Sample ID <b>LCSD-59477</b>	Batch ID: <b>59477</b>	TestNo: <b>SW6020A</b>	Units: <b>mg/L</b>							
SampType: <b>LCSD</b>	Run ID: <b>ICP-MS3_130917A</b>	Analysis Date: <b>9/17/2013 12:25:00 PM</b>	Prep Date: <b>9/13/2013</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chromium	0.197	0.00500	0.200	0	98.6	80	120	3.56	20	
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Sample ID <b>1309022-04D SD</b>	Batch ID: <b>59477</b>	TestNo: <b>SW6020A</b>	Units: <b>mg/L</b>							
SampType: <b>SD</b>	Run ID: <b>ICP-MS3_130917A</b>	Analysis Date: <b>9/17/2013 12:43:00 PM</b>	Prep Date: <b>9/13/2013</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chromium	<0.0100	0.0250	0	0				0	10	
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Sample ID <b>1309022-04D PDS</b>	Batch ID: <b>59477</b>	TestNo: <b>SW6020A</b>	Units: <b>mg/L</b>							
SampType: <b>PDS</b>	Run ID: <b>ICP-MS3_130917A</b>	Analysis Date: <b>9/17/2013 1:43:00 PM</b>	Prep Date: <b>9/13/2013</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chromium	0.198	0.00500	0.200	0	98.9	80	120			
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Sample ID <b>1309022-04D MS</b>	Batch ID: <b>59477</b>	TestNo: <b>SW6020A</b>	Units: <b>mg/L</b>							
SampType: <b>MS</b>	Run ID: <b>ICP-MS3_130917A</b>	Analysis Date: <b>9/17/2013 1:49:00 PM</b>	Prep Date: <b>9/13/2013</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chromium	0.207	0.00500	0.200	0	104	80	120			
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Sample ID <b>1309022-04D MSD</b>	Batch ID: <b>59477</b>	TestNo: <b>SW6020A</b>	Units: <b>mg/L</b>							
SampType: <b>MSD</b>	Run ID: <b>ICP-MS3_130917A</b>	Analysis Date: <b>9/17/2013 1:55:00 PM</b>	Prep Date: <b>9/13/2013</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chromium	0.205	0.00500	0.200	0	102	80	120	1.31	20	
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<p><b>Qualifiers:</b></p> <p>B Analyte detected in the associated Method Blank</p> <p>J Analyte detected between MDL and RL</p> <p>ND Not Detected at the Method Detection Limit</p> <p>RL Reporting Limit</p> <p>J Analyte detected between SDL and RL</p>	<p>DF Dilution Factor</p> <p>MDL Method Detection Limit</p> <p>R RPD outside accepted control limits</p> <p>S Spike Recovery outside control limits</p> <p>N Parameter not NELAC certified</p>
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**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1309089  
**Project:** HELSTF Chromate Spill

## ANALYTICAL QC SUMMARY REPORT

**RunID:** ICP-MS3\_130917A

Sample ID <b>1309089-03C MS</b>	Batch ID: <b>59477</b>	TestNo: <b>SW6020A</b>	Units: <b>mg/L</b>							
SampType: <b>MS</b>	Run ID: <b>ICP-MS3_130917A</b>	Analysis Date: <b>9/17/2013 2:01:00 PM</b>	Prep Date: <b>9/13/2013</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.173	0.00500	0.200	0.00376	84.8	80	120			

Sample ID <b>1309089-03C MSD</b>	Batch ID: <b>59477</b>	TestNo: <b>SW6020A</b>	Units: <b>mg/L</b>							
SampType: <b>MSD</b>	Run ID: <b>ICP-MS3_130917A</b>	Analysis Date: <b>9/17/2013 2:07:00 PM</b>	Prep Date: <b>9/13/2013</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.173	0.00500	0.200	0.00376	84.6	80	120	0.173	20	

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1309089  
**Project:** HELSTF Chromate Spill

## ANALYTICAL QC SUMMARY REPORT

**RunID:** ICP-MS3\_130917A

Sample ID	ICV1-130917	Batch ID:	R68688	TestNo:	SW6020A	Units:	mg/L				
SampType:	ICV	Run ID:	ICP-MS3_130917A	Analysis Date:	9/17/2013 11:43:00 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium		0.0987	0.00500	0.100	0	98.7	90	110			

Sample ID	CCV1-130917	Batch ID:	R68688	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS3_130917A	Analysis Date:	9/17/2013 2:37:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium		0.210	0.00500	0.200	0	105	90	110			

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	DF Dilution Factor	
	J Analyte detected between MDL and RL	MDL Method Detection Limit	
	ND Not Detected at the Method Detection Limit	R RPD outside accepted control limits	
	RL Reporting Limit	S Spike Recovery outside control limits	
	J Analyte detected between SDL and RL	N Parameter not NELAC certified	

**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1309089  
**Project:** HELSTF Chromate Spill

## ANALYTICAL QC SUMMARY REPORT

**RunID: GCMS5\_130911B**

The QC data in batch 59433 applies to the following samples: 1309089-01A, 1309089-02A, 1309089-03A, 1309089-04A

Sample ID: <b>LCS-59433</b>	Batch ID: <b>59433</b>	TestNo: <b>SW8260C</b>	Units: <b>mg/L</b>
SampType: <b>LCS</b>	Run ID: <b>GCMS5_130911B</b>	Analysis Date: <b>9/11/2013 10:21:00 AM</b>	Prep Date: <b>9/11/2013</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	0.0237	0.00100	0.0232	0	102	80	130			
1,1,1-Trichloroethane	0.0243	0.00100	0.0232	0	105	65	130			
1,1,2,2-Tetrachloroethane	0.0239	0.00100	0.0232	0	103	65	130			
1,1,2-Trichloroethane	0.0237	0.00100	0.0232	0	102	75	125			
1,1-Dichloroethane	0.0242	0.00100	0.0232	0	104	70	135			
1,1-Dichloroethene	0.0245	0.00100	0.0232	0	105	70	130			
1,1-Dichloropropene	0.0244	0.00100	0.0232	0	105	75	130			
1,2,3-Trichlorobenzene	0.0219	0.00500	0.0232	0	94.5	55	140			
1,2,3-Trichloropropane	0.0237	0.00100	0.0232	0	102	75	125			
1,2,4-Trichlorobenzene	0.0219	0.00500	0.0232	0	94.4	65	135			
1,2,4-Trimethylbenzene	0.0252	0.00500	0.0232	0	108	75	130			
1,2-Dibromo-3-chloropropane	0.0211	0.0100	0.0232	0	90.8	50	130			
1,2-Dibromoethane	0.0235	0.00100	0.0232	0	101	80	120			
1,2-Dichlorobenzene	0.0241	0.00100	0.0232	0	104	70	120			
1,2-Dichloroethane	0.0238	0.00100	0.0232	0	103	70	130			
1,2-Dichloropropane	0.0240	0.00100	0.0232	0	103	75	125			
1,3,5-Trimethylbenzene	0.0249	0.00500	0.0232	0	107	75	130			
1,3-Dichlorobenzene	0.0239	0.00100	0.0232	0	103	75	125			
1,3-Dichloropropane	0.0239	0.00100	0.0232	0	103	75	125			
1,4-Dichloro-2-butene	0.0232	0.00200	0.0232	0	100	50	150			
1,4-Dichlorobenzene	0.0231	0.00100	0.0232	0	99.6	75	125			
2,2-Dichloropropane	0.0255	0.00100	0.0232	0	110	70	135			
2-Butanone	0.282	0.0150	0.291	0	97.0	30	150			
2-Chloroethylvinylether	0.0230	0.0150	0.0232	0	99.3	50	150			
2-Chlorotoluene	0.0247	0.00100	0.0232	0	107	75	125			
2-Hexanone	0.305	0.0150	0.291	0	105	55	130			
4-Chlorotoluene	0.0246	0.00100	0.0232	0	106	75	130			
4-Methyl-2-pentanone	0.302	0.0150	0.291	0	104	60	135			
Acetone	0.314	0.0150	0.291	0	108	40	140			
Acrylonitrile	0.0488	0.00300	0.0464	0	105	50	150			
Benzene	0.0240	0.00100	0.0232	0	103	80	120			
Bromobenzene	0.0240	0.00100	0.0232	0	103	75	125			
Bromochloromethane	0.0246	0.00100	0.0232	0	106	65	130			
Bromodichloromethane	0.0246	0.00100	0.0232	0	106	75	120			
Bromoform	0.0235	0.00100	0.0232	0	101	70	130			
Bromomethane	0.0239	0.00100	0.0232	0	103	30	145			
Carbon disulfide	0.0240	0.0150	0.0232	0	103	35	160			
Carbon tetrachloride	0.0243	0.00100	0.0232	0	105	65	140			
Chlorobenzene	0.0235	0.00100	0.0232	0	101	80	120			
Chloroethane	0.0267	0.00100	0.0232	0	115	60	135			

<b>Qualifiers:</b>	B	Analyte detected in the associated Method Blank	DF	Dilution Factor
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
	RL	Reporting Limit	S	Spike Recovery outside control limits
	J	Analyte detected between SDL and RL	N	Parameter not NELAC certified

**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1309089  
**Project:** HELSTF Chromate Spill

## ANALYTICAL QC SUMMARY REPORT

**RunID: GCMS5\_130911B**

Sample ID <b>LCS-59433</b>	Batch ID: <b>59433</b>	TestNo: <b>SW8260C</b>	Units: <b>mg/L</b>
SampType: <b>LCS</b>	Run ID: <b>GCMS5_130911B</b>	Analysis Date: <b>9/11/2013 10:21:00 AM</b>	Prep Date: <b>9/11/2013</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloroform	0.0246	0.00100	0.0232	0	106	65	135			
Chloromethane	0.0256	0.00100	0.0232	0	110	40	125			
cis-1,2-Dichloroethene	0.0240	0.00100	0.0232	0	103	70	125			
cis-1,3-Dichloropropene	0.0246	0.00100	0.0232	0	106	70	130			
Dibromochloromethane	0.0240	0.00100	0.0232	0	103	60	135			
Dibromomethane	0.0245	0.00100	0.0232	0	105	75	125			
Dichlorodifluoromethane	0.0234	0.00100	0.0232	0	101	30	155			
Ethylbenzene	0.0243	0.00100	0.0232	0	105	75	125			
Iodomethane	0.0259	0.0150	0.0232	0	112	50	150			
Isopropylbenzene	0.0254	0.00100	0.0232	0	109	75	125			
m,p-Xylene	0.0496	0.00200	0.0464	0	107	75	130			
Methyl tert-butyl ether	0.0234	0.00100	0.0232	0	101	65	125			
Methylene chloride	0.0255	0.00250	0.0232	0	110	55	140			
n-Butylbenzene	0.0248	0.00100	0.0232	0	107	70	135			
n-Propylbenzene	0.0249	0.00100	0.0232	0	107	70	130			
o-Xylene	0.0252	0.00100	0.0232	0	108	80	120			
p-Isopropyltoluene	0.0247	0.00100	0.0232	0	106	75	130			
sec-Butylbenzene	0.0247	0.00100	0.0232	0	107	70	125			
Styrene	0.0253	0.00100	0.0232	0	109	65	135			
tert-Butylbenzene	0.0244	0.00100	0.0232	0	105	70	130			
Tetrachloroethene	0.0241	0.00200	0.0232	0	104	45	150			
Toluene	0.0232	0.00200	0.0232	0	99.8	75	120			
trans-1,2-Dichloroethene	0.0244	0.00100	0.0232	0	105	60	140			
trans-1,3-Dichloropropene	0.0244	0.00100	0.0232	0	105	55	140			
Trichloroethene	0.0235	0.00200	0.0232	0	101	70	125			
Trichlorofluoromethane	0.0263	0.00100	0.0232	0	113	60	145			
Vinyl chloride	0.0259	0.00100	0.0232	0	112	50	145			
Surr: 1,2-Dichloroethane-d4	204		200.0		102	70	120			
Surr: 4-Bromofluorobenzene	203		200.0		101	75	120			
Surr: Dibromofluoromethane	205		200.0		102	85	115			
Surr: Toluene-d8	195		200.0		97.5	85	120			

Sample ID <b>MB-59433</b>	Batch ID: <b>59433</b>	TestNo: <b>SW8260C</b>	Units: <b>mg/L</b>
SampType: <b>MBLK</b>	Run ID: <b>GCMS5_130911B</b>	Analysis Date: <b>9/11/2013 12:16:00 PM</b>	Prep Date: <b>9/11/2013</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	<0.000200	0.00100								
1,1,1-Trichloroethane	<0.000200	0.00100								
1,1,2,2-Tetrachloroethane	<0.000200	0.00100								
1,1,2-Trichloroethane	<0.000200	0.00100								
1,1-Dichloroethane	<0.000200	0.00100								

**Qualifiers:**

B Analyte detected in the associated Method Blank	DF Dilution Factor
J Analyte detected between MDL and RL	MDL Method Detection Limit
ND Not Detected at the Method Detection Limit	R RPD outside accepted control limits
RL Reporting Limit	S Spike Recovery outside control limits
J Analyte detected between SDL and RL	N Parameter not NELAC certified

**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1309089  
**Project:** HELSTF Chromate Spill

## ANALYTICAL QC SUMMARY REPORT

**RunID:** GCMS5\_130911B

Sample ID <b>MB-59433</b>	Batch ID: <b>59433</b>	TestNo: <b>SW8260C</b>	Units: <b>mg/L</b>
SampType: <b>MBLK</b>	Run ID: <b>GCMS5_130911B</b>	Analysis Date: <b>9/11/2013 12:16:00 PM</b>	Prep Date: <b>9/11/2013</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	<0.000200	0.00100								
1,1-Dichloropropene	<0.000200	0.00100								
1,2,3-Trichlorobenzene	<0.00150	0.00500								
1,2,3-Trichloropropane	<0.000300	0.00100								
1,2,4-Trichlorobenzene	<0.00150	0.00500								
1,2,4-Trimethylbenzene	<0.00150	0.00500								
1,2-Dibromo-3-chloropropane	<0.00300	0.0100								
1,2-Dibromoethane	<0.000200	0.00100								
1,2-Dichlorobenzene	<0.000300	0.00100								
1,2-Dichloroethane	<0.000300	0.00100								
1,2-Dichloropropane	<0.000200	0.00100								
1,3,5-Trimethylbenzene	<0.00150	0.00500								
1,3-Dichlorobenzene	<0.000300	0.00100								
1,3-Dichloropropane	<0.000200	0.00100								
1,4-Dichloro-2-butene	<0.00200	0.00200								
1,4-Dichlorobenzene	<0.000300	0.00100								
2,2-Dichloropropane	<0.000200	0.00100								
2-Butanone	<0.00500	0.0150								
2-Chloroethylvinylether	<0.00500	0.0150								
2-Chlorotoluene	<0.000300	0.00100								
2-Hexanone	<0.00500	0.0150								
4-Chlorotoluene	<0.000300	0.00100								
4-Methyl-2-pentanone	<0.00500	0.0150								
Acetone	<0.00500	0.0150								
Acrylonitrile	<0.00100	0.00300								
Benzene	<0.000200	0.00100								
Bromobenzene	<0.000200	0.00100								
Bromochloromethane	<0.000200	0.00100								
Bromodichloromethane	<0.000200	0.00100								
Bromoform	<0.000200	0.00100								
Bromomethane	<0.000300	0.00100								
Carbon disulfide	<0.00500	0.0150								
Carbon tetrachloride	<0.000200	0.00100								
Chlorobenzene	<0.000200	0.00100								
Chloroethane	<0.000300	0.00100								
Chloroform	<0.000300	0.00100								
Chloromethane	<0.000300	0.00100								
cis-1,2-Dichloroethene	<0.000200	0.00100								
cis-1,3-Dichloropropene	<0.000200	0.00100								
Dibromochloromethane	<0.000200	0.00100								
Dibromomethane	<0.000200	0.00100								

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	DF Dilution Factor	
	J Analyte detected between MDL and RL	MDL Method Detection Limit	
	ND Not Detected at the Method Detection Limit	R RPD outside accepted control limits	
	RL Reporting Limit	S Spike Recovery outside control limits	
	J Analyte detected between SDL and RL	N Parameter not NELAC certified	

**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1309089  
**Project:** HELSTF Chromate Spill

## ANALYTICAL QC SUMMARY REPORT

**RunID:** GCMS5\_130911B

Sample ID <b>MB-59433</b>	Batch ID: <b>59433</b>	TestNo: <b>SW8260C</b>	Units: <b>mg/L</b>
SampType: <b>MBLK</b>	Run ID: <b>GCMS5_130911B</b>	Analysis Date: <b>9/11/2013 12:16:00 PM</b>	Prep Date: <b>9/11/2013</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	<0.000200	0.00100								
Ethylbenzene	<0.000300	0.00100								
Iodomethane	<0.00500	0.0150								
Isopropylbenzene	<0.000200	0.00100								
m,p-Xylene	<0.000600	0.00200								
Methyl tert-butyl ether	<0.000300	0.00100								
Methylene chloride	<0.00250	0.00250								
n-Butylbenzene	<0.000300	0.00100								
n-Propylbenzene	<0.000300	0.00100								
o-Xylene	<0.000300	0.00100								
p-Isopropyltoluene	<0.000300	0.00100								
sec-Butylbenzene	<0.000300	0.00100								
Styrene	<0.000200	0.00100								
tert-Butylbenzene	<0.000300	0.00100								
Tetrachloroethene	<0.000600	0.00200								
Toluene	<0.000600	0.00200								
trans-1,2-Dichloroethene	<0.000200	0.00100								
trans-1,3-Dichloropropene	<0.000200	0.00100								
Trichloroethene	<0.000600	0.00200								
Trichlorofluoromethane	<0.000200	0.00100								
Vinyl chloride	<0.000100	0.00100								
Surr: 1,2-Dichloroethane-d4	218		200.0		109	70	120			
Surr: 4-Bromofluorobenzene	212		200.0		106	75	120			
Surr: Dibromofluoromethane	217		200.0		109	85	115			
Surr: Toluene-d8	197		200.0		98.4	85	120			

Sample ID <b>1309089-03AMS</b>	Batch ID: <b>59433</b>	TestNo: <b>SW8260C</b>	Units: <b>mg/L</b>
SampType: <b>MS</b>	Run ID: <b>GCMS5_130911B</b>	Analysis Date: <b>9/11/2013 4:06:00 PM</b>	Prep Date: <b>9/11/2013</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	0.0231	0.00100	0.0232	0	99.5	80	130			
1,1,1-Trichloroethane	0.0246	0.00100	0.0232	0	106	65	130			
1,1,2,2-Tetrachloroethane	0.0254	0.00100	0.0232	0	110	65	130			
1,1,2-Trichloroethane	0.0250	0.00100	0.0232	0	108	75	125			
1,1-Dichloroethane	0.0244	0.00100	0.0232	0	105	70	135			
1,1-Dichloroethene	0.0234	0.00100	0.0232	0	101	70	130			
1,1-Dichloropropene	0.0250	0.00100	0.0232	0	108	75	130			
1,2,3-Trichlorobenzene	0.0223	0.00500	0.0232	0	95.9	55	140			
1,2,3-Trichloropropane	0.0255	0.00100	0.0232	0	110	75	125			
1,2,4-Trichlorobenzene	0.0214	0.00500	0.0232	0	92.5	65	135			
1,2,4-Trimethylbenzene	0.0243	0.00500	0.0232	0	105	75	130			

**Qualifiers:**

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAC certified

**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1309089  
**Project:** HELSTF Chromate Spill

## ANALYTICAL QC SUMMARY REPORT

**RunID:** GCMS5\_130911B

Sample ID: <b>1309089-03AMS</b>	Batch ID: <b>59433</b>	TestNo: <b>SW8260C</b>	Units: <b>mg/L</b>
SampType: <b>MS</b>	Run ID: <b>GCMS5_130911B</b>	Analysis Date: <b>9/11/2013 4:06:00 PM</b>	Prep Date: <b>9/11/2013</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	0.0238	0.0100	0.0232	0	102	50	130			
1,2-Dibromoethane	0.0237	0.00100	0.0232	0	102	80	120			
1,2-Dichlorobenzene	0.0235	0.00100	0.0232	0	101	70	120			
1,2-Dichloroethane	0.0249	0.00100	0.0232	0	107	70	130			
1,2-Dichloropropane	0.0239	0.00100	0.0232	0	103	75	125			
1,3,5-Trimethylbenzene	0.0241	0.00500	0.0232	0	104	75	130			
1,3-Dichlorobenzene	0.0233	0.00100	0.0232	0	101	75	125			
1,3-Dichloropropane	0.0237	0.00100	0.0232	0	102	75	125			
1,4-Dichloro-2-butene	0.0254	0.00200	0.0232	0	109	50	150			
1,4-Dichlorobenzene	0.0229	0.00100	0.0232	0	98.8	75	125			
2,2-Dichloropropane	0.0247	0.00100	0.0232	0	107	70	135			
2-Butanone	0.316	0.0150	0.291	0	109	30	150			
2-Chloroethylvinylether	0.0233	0.0150	0.0232	0	101	50	150			
2-Chlorotoluene	0.0239	0.00100	0.0232	0	103	75	125			
2-Hexanone	0.382	0.0150	0.291	0	131	55	130			S
4-Chlorotoluene	0.0238	0.00100	0.0232	0	102	75	130			
4-Methyl-2-pentanone	0.363	0.0150	0.291	0	125	60	135			
Acetone	0.336	0.0150	0.291	0	116	40	140			
Acrylonitrile	0.0516	0.00300	0.0464	0	111	50	150			
Benzene	0.0244	0.00100	0.0232	0	105	80	120			
Bromobenzene	0.0232	0.00100	0.0232	0	100	75	125			
Bromochloromethane	0.0250	0.00100	0.0232	0	108	65	130			
Bromodichloromethane	0.0249	0.00100	0.0232	0	107	75	120			
Bromoform	0.0228	0.00100	0.0232	0	98.1	70	130			
Bromomethane	0.0218	0.00100	0.0232	0	94.0	30	145			
Carbon disulfide	0.0226	0.0150	0.0232	0	97.2	35	160			
Carbon tetrachloride	0.0240	0.00100	0.0232	0	103	65	140			
Chlorobenzene	0.0236	0.00100	0.0232	0	102	80	120			
Chloroethane	0.0270	0.00100	0.0232	0	116	60	135			
Chloroform	0.0249	0.00100	0.0232	0	107	65	135			
Chloromethane	0.0248	0.00100	0.0232	0	107	40	125			
cis-1,2-Dichloroethene	0.0240	0.00100	0.0232	0	103	70	125			
cis-1,3-Dichloropropene	0.0244	0.00100	0.0232	0	105	70	130			
Dibromochloromethane	0.0229	0.00100	0.0232	0	98.6	60	135			
Dibromomethane	0.0244	0.00100	0.0232	0	105	75	125			
Dichlorodifluoromethane	0.0241	0.00100	0.0232	0	104	30	155			
Ethylbenzene	0.0237	0.00100	0.0232	0	102	75	125			
Iodomethane	0.0207	0.0150	0.0232	0	89.0	50	150			
Isopropylbenzene	0.0242	0.00100	0.0232	0	105	75	125			
m,p-Xylene	0.0481	0.00200	0.0464	0	104	75	130			
Methyl tert-butyl ether	0.0241	0.00100	0.0232	0	104	65	125			

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	DF Dilution Factor	
	J Analyte detected between MDL and RL	MDL Method Detection Limit	
	ND Not Detected at the Method Detection Limit	R RPD outside accepted control limits	
	RL Reporting Limit	S Spike Recovery outside control limits	
	J Analyte detected between SDL and RL	N Parameter not NELAC certified	

**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1309089  
**Project:** HELSTF Chromate Spill

## ANALYTICAL QC SUMMARY REPORT

**RunID: GCMS5\_130911B**

Sample ID: <b>1309089-03AMS</b>	Batch ID: <b>59433</b>	TestNo: <b>SW8260C</b>	Units: <b>mg/L</b>
SampType: <b>MS</b>	Run ID: <b>GCMS5_130911B</b>	Analysis Date: <b>9/11/2013 4:06:00 PM</b>	Prep Date: <b>9/11/2013</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methylene chloride	0.0246	0.00250	0.0232	0	106	55	140			
n-Butylbenzene	0.0237	0.00100	0.0232	0	102	70	135			
n-Propylbenzene	0.0238	0.00100	0.0232	0	103	70	130			
o-Xylene	0.0240	0.00100	0.0232	0	103	80	120			
p-Isopropyltoluene	0.0234	0.00100	0.0232	0	101	75	130			
sec-Butylbenzene	0.0234	0.00100	0.0232	0	101	70	125			
Styrene	0.0242	0.00100	0.0232	0	104	65	135			
tert-Butylbenzene	0.0234	0.00100	0.0232	0	101	70	130			
Tetrachloroethene	0.0235	0.00200	0.0232	0	101	45	150			
Toluene	0.0245	0.00200	0.0232	0	105	75	120			
trans-1,2-Dichloroethene	0.0239	0.00100	0.0232	0	103	60	140			
trans-1,3-Dichloropropene	0.0244	0.00100	0.0232	0	105	55	140			
Trichloroethene	0.0242	0.00200	0.0232	0	104	70	125			
Trichlorofluoromethane	0.0271	0.00100	0.0232	0	117	60	145			
Vinyl chloride	0.0252	0.00100	0.0232	0	108	50	145			
Surr: 1,2-Dichloroethane-d4	215		200.0		108	70	120			
Surr: 4-Bromofluorobenzene	201		200.0		100	75	120			
Surr: Dibromofluoromethane	210		200.0		105	85	115			
Surr: Toluene-d8	196		200.0		97.9	85	120			

Sample ID: <b>1309089-03AMSD</b>	Batch ID: <b>59433</b>	TestNo: <b>SW8260C</b>	Units: <b>mg/L</b>
SampType: <b>MSD</b>	Run ID: <b>GCMS5_130911B</b>	Analysis Date: <b>9/11/2013 4:31:00 PM</b>	Prep Date: <b>9/11/2013</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	0.0229	0.00100	0.0232	0	98.6	80	130	0.914	30	
1,1,1-Trichloroethane	0.0234	0.00100	0.0232	0	101	65	130	4.75	30	
1,1,2,2-Tetrachloroethane	0.0255	0.00100	0.0232	0	110	65	130	0.314	30	
1,1,2-Trichloroethane	0.0239	0.00100	0.0232	0	103	75	125	4.46	30	
1,1-Dichloroethane	0.0238	0.00100	0.0232	0	103	70	135	2.37	30	
1,1-Dichloroethene	0.0233	0.00100	0.0232	0	101	70	130	0.128	30	
1,1-Dichloropropene	0.0245	0.00100	0.0232	0	105	75	130	1.98	30	
1,2,3-Trichlorobenzene	0.0218	0.00500	0.0232	0	94.2	55	140	1.86	30	
1,2,3-Trichloropropane	0.0255	0.00100	0.0232	0	110	75	125	0.118	30	
1,2,4-Trichlorobenzene	0.0220	0.00500	0.0232	0	94.7	65	135	2.35	30	
1,2,4-Trimethylbenzene	0.0244	0.00500	0.0232	0	105	75	130	0.369	30	
1,2-Dibromo-3-chloropropane	0.0236	0.0100	0.0232	0	102	50	130	0.718	30	
1,2-Dibromoethane	0.0237	0.00100	0.0232	0	102	80	120	0.127	30	
1,2-Dichlorobenzene	0.0229	0.00100	0.0232	0	98.7	70	120	2.50	30	
1,2-Dichloroethane	0.0242	0.00100	0.0232	0	104	70	130	3.01	30	
1,2-Dichloropropane	0.0232	0.00100	0.0232	0	100	75	125	2.84	30	
1,3,5-Trimethylbenzene	0.0239	0.00500	0.0232	0	103	75	130	0.875	30	

**Qualifiers:** B Analyte detected in the associated Method Blank      DF Dilution Factor  
J Analyte detected between MDL and RL      MDL Method Detection Limit  
ND Not Detected at the Method Detection Limit      R RPD outside accepted control limits  
RL Reporting Limit      S Spike Recovery outside control limits  
J Analyte detected between SDL and RL      N Parameter not NELAC certified

**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1309089  
**Project:** HELSTF Chromate Spill

## ANALYTICAL QC SUMMARY REPORT

**RunID: GCMS5\_130911B**

Sample ID: <b>1309089-03AMSD</b>	Batch ID: <b>59433</b>	TestNo: <b>SW8260C</b>	Units: <b>mg/L</b>
SampType: <b>MSD</b>	Run ID: <b>GCMS5_130911B</b>	Analysis Date: <b>9/11/2013 4:31:00 PM</b>	Prep Date: <b>9/11/2013</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	0.0234	0.00100	0.0232	0	101	75	125	0.300	30	
1,3-Dichloropropane	0.0240	0.00100	0.0232	0	104	75	125	1.21	30	
1,4-Dichloro-2-butene	0.0256	0.00200	0.0232	0	110	50	150	0.628	30	
1,4-Dichlorobenzene	0.0224	0.00100	0.0232	0	96.6	75	125	2.25	30	
2,2-Dichloropropane	0.0240	0.00100	0.0232	0	103	70	135	3.16	30	
2-Butanone	0.322	0.0150	0.291	0	111	30	150	1.87	30	
2-Chloroethylvinylether	0.0232	0.0150	0.0232	0	100	50	150	0.386	30	
2-Chlorotoluene	0.0234	0.00100	0.0232	0	101	75	125	1.73	30	
2-Hexanone	0.396	0.0150	0.291	0	136	55	130	3.60	30	S
4-Chlorotoluene	0.0238	0.00100	0.0232	0	103	75	130	0.294	30	
4-Methyl-2-pentanone	0.378	0.0150	0.291	0	130	60	135	3.97	30	
Acetone	0.336	0.0150	0.291	0	116	40	140	0.077	30	
Acrylonitrile	0.0520	0.00300	0.0464	0	112	50	150	0.849	30	
Benzene	0.0238	0.00100	0.0232	0	103	80	120	2.49	30	
Bromobenzene	0.0231	0.00100	0.0232	0	99.7	75	125	0.302	30	
Bromochloromethane	0.0243	0.00100	0.0232	0	105	65	130	3.08	30	
Bromodichloromethane	0.0236	0.00100	0.0232	0	102	75	120	5.36	30	
Bromoform	0.0229	0.00100	0.0232	0	98.7	70	130	0.526	30	
Bromomethane	0.0230	0.00100	0.0232	0	98.9	30	145	5.09	30	
Carbon disulfide	0.0222	0.0150	0.0232	0	95.6	35	160	1.61	30	
Carbon tetrachloride	0.0230	0.00100	0.0232	0	99.3	65	140	4.08	30	
Chlorobenzene	0.0234	0.00100	0.0232	0	101	80	120	0.511	30	
Chloroethane	0.0249	0.00100	0.0232	0	107	60	135	7.87	30	
Chloroform	0.0241	0.00100	0.0232	0	104	65	135	3.43	30	
Chloromethane	0.0237	0.00100	0.0232	0	102	40	125	4.58	30	
cis-1,2-Dichloroethene	0.0233	0.00100	0.0232	0	100	70	125	3.09	30	
cis-1,3-Dichloropropene	0.0239	0.00100	0.0232	0	103	70	130	2.11	30	
Dibromochloromethane	0.0230	0.00100	0.0232	0	99.3	60	135	0.741	30	
Dibromomethane	0.0241	0.00100	0.0232	0	104	75	125	1.16	30	
Dichlorodifluoromethane	0.0212	0.00100	0.0232	0	91.3	30	155	12.8	30	
Ethylbenzene	0.0235	0.00100	0.0232	0	101	75	125	0.678	30	
Iodomethane	0.0228	0.0150	0.0232	0	98.4	50	150	10.0	30	
Isopropylbenzene	0.0241	0.00100	0.0232	0	104	75	125	0.662	30	
m,p-Xylene	0.0477	0.00200	0.0464	0	103	75	130	0.794	30	
Methyl tert-butyl ether	0.0240	0.00100	0.0232	0	103	65	125	0.541	30	
Methylene chloride	0.0246	0.00250	0.0232	0	106	55	140	0.081	30	
n-Butylbenzene	0.0236	0.00100	0.0232	0	102	70	135	0.677	30	
n-Propylbenzene	0.0235	0.00100	0.0232	0	101	70	130	1.10	30	
o-Xylene	0.0238	0.00100	0.0232	0	103	80	120	0.711	30	
p-Isopropyltoluene	0.0237	0.00100	0.0232	0	102	75	130	1.19	30	
sec-Butylbenzene	0.0239	0.00100	0.0232	0	103	70	125	1.99	30	

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	DF Dilution Factor	
	J Analyte detected between MDL and RL	MDL Method Detection Limit	
	ND Not Detected at the Method Detection Limit	R RPD outside accepted control limits	
	RL Reporting Limit	S Spike Recovery outside control limits	
	J Analyte detected between SDL and RL	N Parameter not NELAC certified	

**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1309089  
**Project:** HELSTF Chromate Spill

## ANALYTICAL QC SUMMARY REPORT

**RunID: GCMS5\_130911B**

Sample ID: <b>1309089-03AMSD</b>	Batch ID: <b>59433</b>	TestNo: <b>SW8260C</b>	Units: <b>mg/L</b>
SampType: <b>MSD</b>	Run ID: <b>GCMS5_130911B</b>	Analysis Date: <b>9/11/2013 4:31:00 PM</b>	Prep Date: <b>9/11/2013</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Styrene	0.0242	0.00100	0.0232	0	104	65	135	0.331	30	
tert-Butylbenzene	0.0233	0.00100	0.0232	0	100	70	130	0.514	30	
Tetrachloroethene	0.0235	0.00200	0.0232	0	101	45	150	0.213	30	
Toluene	0.0237	0.00200	0.0232	0	102	75	120	3.07	30	
trans-1,2-Dichloroethene	0.0235	0.00100	0.0232	0	101	60	140	1.48	30	
trans-1,3-Dichloropropene	0.0239	0.00100	0.0232	0	103	55	140	2.11	30	
Trichloroethene	0.0234	0.00200	0.0232	0	101	70	125	3.11	30	
Trichlorofluoromethane	0.0252	0.00100	0.0232	0	109	60	145	7.35	30	
Vinyl chloride	0.0241	0.00100	0.0232	0	104	50	145	4.43	30	
Surr: 1,2-Dichloroethane-d4	210		200.0		105	70	120	0	0	
Surr: 4-Bromofluorobenzene	201		200.0		101	75	120	0	0	
Surr: Dibromofluoromethane	202		200.0		101	85	115	0	0	
Surr: Toluene-d8	196		200.0		97.8	85	120	0	0	

<b>Qualifiers:</b>	<p>B Analyte detected in the associated Method Blank</p> <p>J Analyte detected between MDL and RL</p> <p>ND Not Detected at the Method Detection Limit</p> <p>RL Reporting Limit</p> <p>J Analyte detected between SDL and RL</p>	<p>DF Dilution Factor</p> <p>MDL Method Detection Limit</p> <p>R RPD outside accepted control limits</p> <p>S Spike Recovery outside control limits</p> <p>N Parameter not NELAC certified</p>
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**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1309089  
**Project:** HELSTF Chromate Spill

## ANALYTICAL QC SUMMARY REPORT

**RunID:** GCMS5\_130911B

Sample ID <b>ICV-130911</b>	Batch ID: <b>R68597</b>	TestNo: <b>SW8260C</b>	Units: <b>mg/L</b>
SampType: <b>ICV</b>	Run ID: <b>GCMS5_130911B</b>	Analysis Date: <b>9/11/2013 9:55:00 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	0.0491	0.00100	0.0464	0	106	80	120			
1,1,1-Trichloroethane	0.0480	0.00100	0.0464	0	104	80	120			
1,1,2,2-Tetrachloroethane	0.0486	0.00100	0.0464	0	105	80	120			
1,1,2-Trichloroethane	0.0492	0.00100	0.0464	0	106	80	120			
1,1-Dichloroethane	0.0471	0.00100	0.0464	0	102	80	120			
1,1-Dichloroethene	0.0463	0.00100	0.0464	0	99.7	80	120			
1,1-Dichloropropene	0.0502	0.00100	0.0464	0	108	80	120			
1,2,3-Trichlorobenzene	0.0450	0.00500	0.0464	0	96.9	80	120			
1,2,3-Trichloropropane	0.0488	0.00100	0.0464	0	105	80	120			
1,2,4-Trichlorobenzene	0.0474	0.00500	0.0464	0	102	80	120			
1,2,4-Trimethylbenzene	0.0482	0.00500	0.0464	0	104	80	120			
1,2-Dibromo-3-chloropropane	0.0508	0.0100	0.0464	0	110	80	120			
1,2-Dibromoethane	0.0481	0.00100	0.0464	0	104	80	120			
1,2-Dichlorobenzene	0.0473	0.00100	0.0464	0	102	80	120			
1,2-Dichloroethane	0.0484	0.00100	0.0464	0	104	80	120			
1,2-Dichloropropane	0.0481	0.00100	0.0464	0	104	80	120			
1,3,5-Trimethylbenzene	0.0487	0.00500	0.0464	0	105	80	120			
1,3-Dichlorobenzene	0.0477	0.00100	0.0464	0	103	80	120			
1,3-Dichloropropane	0.0485	0.00100	0.0464	0	104	80	120			
1,4-Dichloro-2-butene	0.0520	0.00200	0.0464	0	112	80	120			
1,4-Dichlorobenzene	0.0460	0.00100	0.0464	0	99.1	80	120			
2,2-Dichloropropane	0.0506	0.00100	0.0464	0	109	80	120			
2-Butanone	0.615	0.0150	0.581	0	106	80	120			
2-Chloroethylvinylether	0.0491	0.0150	0.0464	0	106	80	120			
2-Chlorotoluene	0.0475	0.00100	0.0464	0	102	80	120			
2-Hexanone	0.681	0.0150	0.581	0	117	80	120			
4-Chlorotoluene	0.0480	0.00100	0.0464	0	103	80	120			
4-Methyl-2-pentanone	0.654	0.0150	0.581	0	112	80	120			
Acetone	0.652	0.0150	0.581	0	112	80	120			
Acrylonitrile	0.102	0.00300	0.0928	0	110	60	140			
Benzene	0.0483	0.00100	0.0464	0	104	80	120			
Bromobenzene	0.0458	0.00100	0.0464	0	98.8	80	120			
Bromochloromethane	0.0477	0.00100	0.0464	0	103	80	120			
Bromodichloromethane	0.0503	0.00100	0.0464	0	108	80	120			
Bromoform	0.0522	0.00100	0.0464	0	113	80	120			
Bromomethane	0.0402	0.00100	0.0464	0	86.7	80	120			
Carbon disulfide	0.0460	0.0150	0.0464	0	99.2	80	120			
Carbon tetrachloride	0.0495	0.00100	0.0464	0	107	80	120			
Chlorobenzene	0.0463	0.00100	0.0464	0	99.8	80	120			
Chloroethane	0.0450	0.00100	0.0464	0	96.9	80	120			
Chloroform	0.0481	0.00100	0.0464	0	104	80	120			

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	DF	Dilution Factor
	J Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
	RL Reporting Limit	S	Spike Recovery outside control limits
	J Analyte detected between SDL and RL	N	Parameter not NELAC certified

**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1309089  
**Project:** HELSTF Chromate Spill

## ANALYTICAL QC SUMMARY REPORT

**RunID: GCMS5\_130911B**

Sample ID <b>ICV-130911</b>	Batch ID: <b>R68597</b>	TestNo: <b>SW8260C</b>	Units: <b>mg/L</b>
SampType: <b>ICV</b>	Run ID: <b>GCMS5_130911B</b>	Analysis Date: <b>9/11/2013 9:55:00 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloromethane	0.0437	0.00100	0.0464	0	94.2	80	120			
cis-1,2-Dichloroethene	0.0468	0.00100	0.0464	0	101	80	120			
cis-1,3-Dichloropropene	0.0519	0.00100	0.0464	0	112	80	120			
Dibromochloromethane	0.0507	0.00100	0.0464	0	109	80	120			
Dibromomethane	0.0486	0.00100	0.0464	0	105	80	120			
Dichlorodifluoromethane	0.0408	0.00100	0.0464	0	88.0	80	120			
Ethylbenzene	0.0469	0.00100	0.0464	0	101	80	120			
Iodomethane	0.0464	0.0150	0.0464	0	99.9	80	120			
Isopropylbenzene	0.0493	0.00100	0.0464	0	106	80	120			
m,p-Xylene	0.0959	0.00200	0.0928	0	103	80	120			
Methyl tert-butyl ether	0.0494	0.00100	0.0464	0	107	80	120			
Methylene chloride	0.0486	0.00250	0.0464	0	105	80	120			
n-Butylbenzene	0.0512	0.00100	0.0464	0	110	80	120			
n-Propylbenzene	0.0480	0.00100	0.0464	0	103	80	120			
o-Xylene	0.0500	0.00100	0.0464	0	108	80	120			
p-Isopropyltoluene	0.0497	0.00100	0.0464	0	107	80	120			
sec-Butylbenzene	0.0487	0.00100	0.0464	0	105	80	120			
Styrene	0.0502	0.00100	0.0464	0	108	80	120			
tert-Butylbenzene	0.0481	0.00100	0.0464	0	104	80	120			
Tetrachloroethene	0.0466	0.00200	0.0464	0	100	80	120			
Toluene	0.0474	0.00200	0.0464	0	102	80	120			
trans-1,2-Dichloroethene	0.0468	0.00100	0.0464	0	101	80	120			
trans-1,3-Dichloropropene	0.0524	0.00100	0.0464	0	113	80	120			
Trichloroethene	0.0476	0.00200	0.0464	0	103	80	120			
Trichlorofluoromethane	0.0478	0.00100	0.0464	0	103	80	120			
Vinyl chloride	0.0438	0.00100	0.0464	0	94.4	80	120			
Surr: 1,2-Dichloroethane-d4	206		200.0		103	70	120			
Surr: 4-Bromofluorobenzene	197		200.0		98.5	75	120			
Surr: Dibromofluoromethane	202		200.0		101	85	115			
Surr: Toluene-d8	197		200.0		98.5	85	120			

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	DF Dilution Factor	
	J Analyte detected between MDL and RL	MDL Method Detection Limit	
	ND Not Detected at the Method Detection Limit	R RPD outside accepted control limits	
	RL Reporting Limit	S Spike Recovery outside control limits	
	J Analyte detected between SDL and RL	N Parameter not NELAC certified	

**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1309089  
**Project:** HELSTF Chromate Spill

## ANALYTICAL QC SUMMARY REPORT

**RunID: TITRATOR\_130911A**

The QC data in batch 59441 applies to the following samples: 1309089-02D, 1309089-03D, 1309089-04D

Sample ID	1309093-01D-DUP	Batch ID:	59441	TestNo:	M4500-H+ B	Units:	pH Units@22.0°C			
SampType:	DUP	Run ID:	TITRATOR_130911A	Analysis Date:	9/11/2013 2:29:00 PM	Prep Date:	9/11/2013			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	7.24	0	0	7.240				0	5	

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	DF Dilution Factor
	J Analyte detected between MDL and RL	MDL Method Detection Limit
	ND Not Detected at the Method Detection Limit	R RPD outside accepted control limits
	RL Reporting Limit	S Spike Recovery outside control limits
	J Analyte detected between SDL and RL	N Parameter not NELAC certified

**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1309089  
**Project:** HELSTF Chromate Spill

## ANALYTICAL QC SUMMARY REPORT

**RunID: TITRATOR\_130911A**

Sample ID <b>ICV-130911</b>	Batch ID: <b>R68592</b>	TestNo: <b>M4500-H+ B</b>	Units: <b>pH Units@23.4°C</b>							
SampType: <b>ICV</b>	Run ID: <b>TITRATOR_130911A</b>	Analysis Date: <b>9/11/2013 1:58:00 PM</b>	Prep Date: <b>9/11/2013</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	10.0	0	10.00	0	100	99	101			

Sample ID <b>CCV1-130911</b>	Batch ID: <b>R68592</b>	TestNo: <b>M4500-H+ B</b>	Units: <b>pH Units@23.2°C</b>							
SampType: <b>CCV</b>	Run ID: <b>TITRATOR_130911A</b>	Analysis Date: <b>9/11/2013 2:30:00 PM</b>	Prep Date: <b>9/11/2013</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	7.00	0	7.000	0	100	97.1	102.9			

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	DF Dilution Factor
	J Analyte detected between MDL and RL	MDL Method Detection Limit
	ND Not Detected at the Method Detection Limit	R RPD outside accepted control limits
	RL Reporting Limit	S Spike Recovery outside control limits
	J Analyte detected between SDL and RL	N Parameter not NELAC certified

**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1309089  
**Project:** HELSTF Chromate Spill

## ANALYTICAL QC SUMMARY REPORT

**RunID: TOC\_130911A**

The QC data in batch 59390 applies to the following samples: 1309089-02B, 1309089-03B, 1309089-04B

Sample ID <b>MB-59390</b>	Batch ID: <b>59390</b>	TestNo: <b>M5310C</b>	Units: <b>mg/L</b>							
SampType: <b>MBLK</b>	Run ID: <b>TOC_130911A</b>	Analysis Date: <b>9/11/2013 11:53:00 AM</b>	Prep Date: <b>9/11/2013</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Organic Carbon	<0.300	1.00								

Sample ID <b>LCS-59390</b>	Batch ID: <b>59390</b>	TestNo: <b>M5310C</b>	Units: <b>mg/L</b>							
SampType: <b>LCS</b>	Run ID: <b>TOC_130911A</b>	Analysis Date: <b>9/11/2013 12:13:00 PM</b>	Prep Date: <b>9/11/2013</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Organic Carbon	10.1	1.00	10.00	0	101	80	120			

Sample ID <b>1309022-04CMS</b>	Batch ID: <b>59390</b>	TestNo: <b>M5310C</b>	Units: <b>mg/L</b>							
SampType: <b>MS</b>	Run ID: <b>TOC_130911A</b>	Analysis Date: <b>9/11/2013 2:21:00 PM</b>	Prep Date: <b>9/11/2013</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Organic Carbon	10.3	1.00	10.00	0	103	80	120			

Sample ID <b>1309022-04CMSD</b>	Batch ID: <b>59390</b>	TestNo: <b>M5310C</b>	Units: <b>mg/L</b>							
SampType: <b>MSD</b>	Run ID: <b>TOC_130911A</b>	Analysis Date: <b>9/11/2013 2:41:00 PM</b>	Prep Date: <b>9/11/2013</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Organic Carbon	10.3	1.00	10.00	0	103	80	120	0.460	15	

Sample ID <b>1309089-03BMS</b>	Batch ID: <b>59390</b>	TestNo: <b>M5310C</b>	Units: <b>mg/L</b>							
SampType: <b>MS</b>	Run ID: <b>TOC_130911A</b>	Analysis Date: <b>9/11/2013 5:17:00 PM</b>	Prep Date: <b>9/11/2013</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Organic Carbon	10.8	1.00	10.00	1.122	96.6	80	120			

Sample ID <b>1309089-03BMSD</b>	Batch ID: <b>59390</b>	TestNo: <b>M5310C</b>	Units: <b>mg/L</b>							
SampType: <b>MSD</b>	Run ID: <b>TOC_130911A</b>	Analysis Date: <b>9/11/2013 5:41:00 PM</b>	Prep Date: <b>9/11/2013</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Organic Carbon	10.7	1.00	10.00	1.122	95.5	80	120	1.06	15	

<p><b>Qualifiers:</b></p> <p>B Analyte detected in the associated Method Blank</p> <p>J Analyte detected between MDL and RL</p> <p>ND Not Detected at the Method Detection Limit</p> <p>RL Reporting Limit</p> <p>J Analyte detected between SDL and RL</p>	<p>DF Dilution Factor</p> <p>MDL Method Detection Limit</p> <p>R RPD outside accepted control limits</p> <p>S Spike Recovery outside control limits</p> <p>N Parameter not NELAC certified</p>
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**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1309089  
**Project:** HELSTF Chromate Spill

## ANALYTICAL QC SUMMARY REPORT

**RunID: TOC\_130911A**

Sample ID <b>ICV-130911</b>	Batch ID: <b>R68606</b>	TestNo: <b>M5310C</b>	Units: <b>mg/L</b>
SampType: <b>ICV</b>	Run ID: <b>TOC_130911A</b>	Analysis Date: <b>9/11/2013 11:35:00 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Organic Carbon	15.9	1.00	15.00	0	106	90	110			

Sample ID <b>CCV1-130911</b>	Batch ID: <b>R68606</b>	TestNo: <b>M5310C</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>TOC_130911A</b>	Analysis Date: <b>9/11/2013 3:00:00 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Organic Carbon	10.1	1.00	10.00	0	101	80	120			

Sample ID <b>CCV2-130911</b>	Batch ID: <b>R68606</b>	TestNo: <b>M5310C</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>TOC_130911A</b>	Analysis Date: <b>9/11/2013 6:23:00 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Organic Carbon	9.34	1.00	10.00	0	93.4	80	120			

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	DF Dilution Factor
	J Analyte detected between MDL and RL	MDL Method Detection Limit
	ND Not Detected at the Method Detection Limit	R RPD outside accepted control limits
	RL Reporting Limit	S Spike Recovery outside control limits
	J Analyte detected between SDL and RL	N Parameter not NELAC certified

**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1309089  
**Project:** HELSTF Chromate Spill

## ANALYTICAL QC SUMMARY REPORT

**RunID: UV/VIS\_2\_130911B**

The QC data in batch 59434 applies to the following samples: 1309089-02D, 1309089-03D, 1309089-04D

Sample ID <b>MB-59434</b>	Batch ID: <b>59434</b>	TestNo: <b>M3500-Cr D</b>	Units: <b>mg/L</b>							
SampType: <b>MBLK</b>	Run ID: <b>UV/VIS_2_130911B</b>	Analysis Date: <b>9/11/2013 10:34:00 AM</b>	Prep Date: <b>9/11/2013</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Hexavalent Chromium	<0.00800	0.0100
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Sample ID <b>LCS-59434</b>	Batch ID: <b>59434</b>	TestNo: <b>M3500-Cr D</b>	Units: <b>mg/L</b>							
SampType: <b>LCS</b>	Run ID: <b>UV/VIS_2_130911B</b>	Analysis Date: <b>9/11/2013 10:35:00 AM</b>	Prep Date: <b>9/11/2013</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.103	0.0100	0.100	0	103	85	115
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Sample ID <b>LCSD-59434</b>	Batch ID: <b>59434</b>	TestNo: <b>M3500-Cr D</b>	Units: <b>mg/L</b>							
SampType: <b>LCSD</b>	Run ID: <b>UV/VIS_2_130911B</b>	Analysis Date: <b>9/11/2013 10:35:00 AM</b>	Prep Date: <b>9/11/2013</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.0979	0.0100	0.100	0	97.9	85	115	4.90	15
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Sample ID <b>1309089-03D MS</b>	Batch ID: <b>59434</b>	TestNo: <b>M3500-Cr D</b>	Units: <b>mg/L</b>							
SampType: <b>MS</b>	Run ID: <b>UV/VIS_2_130911B</b>	Analysis Date: <b>9/11/2013 10:39:00 AM</b>	Prep Date: <b>9/11/2013</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.103	0.0100	0.100	0	103	85	115
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Sample ID <b>1309089-03D MSD</b>	Batch ID: <b>59434</b>	TestNo: <b>M3500-Cr D</b>	Units: <b>mg/L</b>							
SampType: <b>MSD</b>	Run ID: <b>UV/VIS_2_130911B</b>	Analysis Date: <b>9/11/2013 10:39:00 AM</b>	Prep Date: <b>9/11/2013</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.109	0.0100	0.100	0	109	85	115	5.43	15
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<b>Qualifiers:</b>	<p>B Analyte detected in the associated Method Blank</p> <p>J Analyte detected between MDL and RL</p> <p>ND Not Detected at the Method Detection Limit</p> <p>RL Reporting Limit</p> <p>J Analyte detected between SDL and RL</p>	<p>DF Dilution Factor</p> <p>MDL Method Detection Limit</p> <p>R RPD outside accepted control limits</p> <p>S Spike Recovery outside control limits</p> <p>N Parameter not NELAC certified</p>
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**CLIENT:** Zia Engineering & Environmental  
**Work Order:** 1309089  
**Project:** HELSTF Chromate Spill

## ANALYTICAL QC SUMMARY REPORT

**RunID: UV/VIS\_2\_130911B**

Sample ID <b>ICV-130911</b>	Batch ID: <b>R68622</b>	TestNo: <b>M3500-Cr D</b>	Units: <b>mg/L</b>							
SampType: <b>ICV</b>	Run ID: <b>UV/VIS_2_130911B</b>	Analysis Date: <b>9/11/2013 10:34:00 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.101	0.0100	0.100	0	101	90	110			

Sample ID <b>CCV-130911</b>	Batch ID: <b>R68622</b>	TestNo: <b>M3500-Cr D</b>	Units: <b>mg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>UV/VIS_2_130911B</b>	Analysis Date: <b>9/11/2013 10:39:00 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.204	0.0100	0.200	0	102	90	110			

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

**Lab Order:** 1309089  
**Client:** Zia Engineering & Environmental  
**Project:** HELSTF Chromate Spill

## Sequence Report

### Run ID: GC15\_130912A

Sample ID	Client Sample ID	Test Number	Batch ID	Dilution	Analysis Date	Prep Date	Matrix
ICV-130912	----	M8015D	R68620	1	9/12/2013 9:32:21 AM		A
LCS-59442	----	M8015D	59442	1	9/12/2013 9:51:03 AM	9/11/2013 2:11:45 PM	A
MB-59442	----	M8015D	59442	1	9/12/2013 10:08:02 AM	9/11/2013 2:11:45 PM	A
1309022-04HMS	----	M8015D	59442	1	9/12/2013 10:33:28 AM	9/11/2013 2:11:45 PM	A
1309022-04HMSD	----	M8015D	59442	1	9/12/2013 10:41:56 AM	9/11/2013 2:11:45 PM	A
1309089-02E	HLSF-0143-HMW-041-0913	M8015D	59442	1	9/12/2013 11:15:48 AM	9/11/2013 2:11:45 PM	A
1309089-03E	HLSF-0143-HMW-040-0913	M8015D	59442	1	9/12/2013 11:24:16 AM	9/11/2013 2:11:45 PM	A
1309089-03EMS	HLSF-0143-HMW-040-0913MS	M8015D	59442	1	9/12/2013 11:32:43 AM	9/11/2013 2:11:45 PM	A
1309089-03EMSD	HLSF-0143-HMW-040-	M8015D	59442	1	9/12/2013 11:41:10 AM	9/11/2013 2:11:45 PM	A
1309089-04E	HLSF-0143-HMW-038-0913	M8015D	59442	1	9/12/2013 11:49:37 AM	9/11/2013 2:11:45 PM	A
CCV1-130912	----	M8015D	R68620	1	9/12/2013 12:46:56 PM		A

### Run ID: GCMS5\_130911B

Sample ID	Client Sample ID	Test Number	Batch ID	Dilution	Analysis Date	Prep Date	Matrix
ICV-130911	----	SW8260C	R68597	1	9/11/2013 9:55:00 AM		A
LCS-59433	----	SW8260C	59433	1	9/11/2013 10:21:00 AM	9/11/2013 9:53:34 AM	A
MB-59433	----	SW8260C	59433	1	9/11/2013 12:16:00 PM	9/11/2013 9:53:34 AM	A
1309089-01A	HLSF-0143-HMW-041-0913-TB	SW8260C	59433	1	9/11/2013 12:49:00 PM	9/11/2013 9:53:34 AM	T
1309089-02A	HLSF-0143-HMW-041-0913	SW8260C	59433	1	9/11/2013 1:14:00 PM	9/11/2013 9:53:34 AM	A
1309089-03A	HLSF-0143-HMW-040-0913	SW8260C	59433	1	9/11/2013 1:38:00 PM	9/11/2013 9:53:34 AM	A
1309089-04A	HLSF-0143-HMW-038-0913	SW8260C	59433	1	9/11/2013 2:03:00 PM	9/11/2013 9:53:34 AM	A
1309089-03AMS	HLSF-0143-HMW-040-0913MS	SW8260C	59433	1	9/11/2013 4:06:00 PM	9/11/2013 9:53:34 AM	A
1309089-03AMSD	HLSF-0143-HMW-040-	SW8260C	59433	1	9/11/2013 4:31:00 PM	9/11/2013 9:53:34 AM	A

**Lab Order:** 1309089  
**Client:** Zia Engineering & Environmental  
**Project:** HELSTF Chromate Spill

**Sequence Report****Run ID: ICP-MS3\_130917A**

Sample ID	Client Sample ID	Test Number	Batch ID	Dilution	Analysis Date	Prep Date	Matrix
BLANK STD 1	----	SW6020A	R68688	1	9/17/2013 10:18:00 AM		A
1/20 ppb STD.	----	SW6020A	R68688	1	9/17/2013 10:24:00 AM		A
10/200 ppb STD.	----	SW6020A	R68688	1	9/17/2013 10:30:00 AM		A
50/1000 ppb STD.	----	SW6020A	R68688	1	9/17/2013 10:36:00 AM		A
100/2000 ppb STD.	----	SW6020A	R68688	1	9/17/2013 10:42:00 AM		A
250/5000 ppb STD.	----	SW6020A	R68688	1	9/17/2013 10:48:00 AM		A
500/10000 ppb STD.	----	SW6020A	R68688	1	9/17/2013 10:54:00 AM		A
2000/25000 ppb ST	----	SW6020A	R68688	1	9/17/2013 11:00:00 AM		A
ICV1-130917	----	SW6020A	R68688	1	9/17/2013 11:43:00 AM		A
ILCVL-130917	----	SW6020A	R68688	1	9/17/2013 12:01:00 PM		A
ICB1-130917	----	SW6020A	R68688	1	9/17/2013 12:07:00 PM		A
MB-59477	----	SW6020A	59477	1	9/17/2013 12:13:00 PM	9/13/2013 9:32:31 AM	A
LCS-59477	----	SW6020A	59477	1	9/17/2013 12:19:00 PM	9/13/2013 9:32:31 AM	A
LCSD-59477	----	SW6020A	59477	1	9/17/2013 12:25:00 PM	9/13/2013 9:32:31 AM	A
1309022-04D SD	----	SW6020A	59477	5	9/17/2013 12:43:00 PM	9/13/2013 9:32:31 AM	A
1309089-02C	HLSF-0143-HMW-041-0913	SW6020A	59477	1	9/17/2013 1:13:00 PM	9/13/2013 9:32:31 AM	A
1309089-03C	HLSF-0143-HMW-040-0913	SW6020A	59477	1	9/17/2013 1:19:00 PM	9/13/2013 9:32:31 AM	A
1309089-04C	HLSF-0143-HMW-038-0913	SW6020A	59477	1	9/17/2013 1:26:00 PM	9/13/2013 9:32:31 AM	A
1309022-04D PDS	----	SW6020A	59477	1	9/17/2013 1:43:00 PM	9/13/2013 9:32:31 AM	A
1309022-04D MS	----	SW6020A	59477	1	9/17/2013 1:49:00 PM	9/13/2013 9:32:31 AM	A
1309022-04D MSD	----	SW6020A	59477	1	9/17/2013 1:55:00 PM	9/13/2013 9:32:31 AM	A
1309089-03C MS	HLSF-0143-HMW-040-0913MS	SW6020A	59477	1	9/17/2013 2:01:00 PM	9/13/2013 9:32:31 AM	A
1309089-03C MSD	HLSF-0143-HMW-040-	SW6020A	59477	1	9/17/2013 2:07:00 PM	9/13/2013 9:32:31 AM	A
CCV1-130917	----	SW6020A	R68688	1	9/17/2013 2:37:00 PM		A
LCVL1-130917	----	SW6020A	R68688	1	9/17/2013 3:10:00 PM		A
CCB1-130917	----	SW6020A	R68688	1	9/17/2013 3:22:00 PM		A

**Run ID: TITRATOR\_130911A**

Sample ID	Client Sample ID	Test Number	Batch ID	Dilution	Analysis Date	Prep Date	Matrix
ICV2-130911	----	M4500-H+ B	R68592	1	9/11/2013 1:55:00 PM	9/11/2013 1:55:00 PM	A
ICV1-130911	----	M4500-H+ B	R68592	1	9/11/2013 1:56:00 PM	9/11/2013 1:56:00 PM	A
ICV-130911	----	M4500-H+ B	R68592	1	9/11/2013 1:58:00 PM	9/11/2013 1:58:00 PM	A
1309089-02D	HLSF-0143-HMW-041-0913	M4500-H+ B	59441	1	9/11/2013 2:20:00 PM	9/11/2013 1:00:00 PM	A
1309089-03D	HLSF-0143-HMW-040-0913	M4500-H+ B	59441	1	9/11/2013 2:22:00 PM	9/11/2013 1:00:00 PM	A
1309089-04D	HLSF-0143-HMW-038-0913	M4500-H+ B	59441	1	9/11/2013 2:25:00 PM	9/11/2013 1:00:00 PM	A
1309093-01D-DUP	----	M4500-H+ B	59441	1	9/11/2013 2:29:00 PM	9/11/2013 1:00:00 PM	A
CCV1-130911	----	M4500-H+ B	R68592	1	9/11/2013 2:30:00 PM	9/11/2013 2:30:00 PM	A

**Lab Order:** 1309089  
**Client:** Zia Engineering & Environmental  
**Project:** HELSTF Chromate Spill

## Sequence Report

### Run ID: TOC\_130911A

Sample ID	Client Sample ID	Test Number	Batch ID	Dilution	Analysis Date	Prep Date	Matrix
ICV-130911	-----	M5310C	R68606	1	9/11/2013 11:35:00 AM		A
MB-59390	-----	M5310C	59390	1	9/11/2013 11:53:00 AM	9/11/2013 9:00:00 AM	A
LCS-59390	-----	M5310C	59390	1	9/11/2013 12:13:00 PM	9/11/2013 9:00:00 AM	A
1309022-04CMS	-----	M5310C	59390	1	9/11/2013 2:21:00 PM	9/11/2013 9:00:00 AM	A
1309022-04CMSD	-----	M5310C	59390	1	9/11/2013 2:41:00 PM	9/11/2013 9:00:00 AM	A
CCV1-130911	-----	M5310C	R68606	1	9/11/2013 3:00:00 PM		A
1309089-02B	HLSF-0143-HMW-041-0913	M5310C	59390	1	9/11/2013 4:28:00 PM	9/11/2013 9:00:00 AM	A
1309089-03B	HLSF-0143-HMW-040-0913	M5310C	59390	1	9/11/2013 4:52:00 PM	9/11/2013 9:00:00 AM	A
1309089-03BMS	HLSF-0143-HMW-040-0913MS	M5310C	59390	1	9/11/2013 5:17:00 PM	9/11/2013 9:00:00 AM	A
1309089-03BMSD	HLSF-0143-HMW-040-	M5310C	59390	1	9/11/2013 5:41:00 PM	9/11/2013 9:00:00 AM	A
1309089-04B	HLSF-0143-HMW-038-0913	M5310C	59390	1	9/11/2013 6:03:00 PM	9/11/2013 9:00:00 AM	A
CCV2-130911	-----	M5310C	R68606	1	9/11/2013 6:23:00 PM		A

### Run ID: UV/VIS\_2\_130911B

Sample ID	Client Sample ID	Test Number	Batch ID	Dilution	Analysis Date	Prep Date	Matrix
ICV-130911	-----	M3500-Cr D	R68622	1	9/11/2013 10:34:00 AM		A
MB-59434	-----	M3500-Cr D	59434	1	9/11/2013 10:34:00 AM	9/11/2013 9:58:54 AM	A
LCS-59434	-----	M3500-Cr D	59434	1	9/11/2013 10:35:00 AM	9/11/2013 9:58:54 AM	A
LCSD-59434	-----	M3500-Cr D	59434	1	9/11/2013 10:35:00 AM	9/11/2013 9:58:54 AM	A
1309089-03D	HLSF-0143-HMW-040-0913	M3500-Cr D	59434	1	9/11/2013 10:39:00 AM	9/11/2013 9:58:54 AM	A
1309089-03D MS	HLSF-0143-HMW-040-0913MS	M3500-Cr D	59434	1	9/11/2013 10:39:00 AM	9/11/2013 9:58:54 AM	A
1309089-03D MSD	HLSF-0143-HMW-040-	M3500-Cr D	59434	1	9/11/2013 10:39:00 AM	9/11/2013 9:58:54 AM	A
1309089-02D	HLSF-0143-HMW-041-0913	M3500-Cr D	59434	1	9/11/2013 10:39:00 AM	9/11/2013 9:58:54 AM	A
1309089-04D	HLSF-0143-HMW-038-0913	M3500-Cr D	59434	1	9/11/2013 10:39:00 AM	9/11/2013 9:58:54 AM	A
CCV-130911	-----	M3500-Cr D	R68622	1	9/11/2013 10:39:00 AM		A